CONGESTION MANAGEMENT PROGRAM FOR SAN BERNARDINO COUNTY

2001 Update
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by
SAN BERNARDINO ASSOCIATED GOVERNMENTS

Prepared by SANBAG
in cooperation with
the Comprehensive Transportation Plan Technical Advisory Committee

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PREFACE

This document is the 2001 update to the Congestion Management Program (CMP) for San Bernardino County, originally adopted in 1992 and updated in 1993, 1995, 1997, and 1999. This revision to the CMP was developed in cooperation with the CTP Technical Advisory, and was recommended for approval by the Plans and Programs Policy Committee of San Bernardino Associated Governments, prior to its approval by the full Board of Directors.

This document identifies goals of the program, defines legal requirements, provides other background information and describes each individual element, component, and requirement of the program.

It also reflects all legislative changes to the program since its inception in 1992. The CMP defines a network of state highways and arterials, level of service standards and related procedures, and provides technical justification for the approach. The decisions reflected in this document are subject to ongoing review. Numerous opportunities for review have and will continue to be provided through meetings of the Technical Advisory Committee, its subcommittees, the Plans and Programs Policy Committee, and the SANBAG Board of Directors. The next regular update of the CMP is scheduled for 2003, although interim modifications or refinements through the technical and policy channels described above can occur as needed.

DEFINITIONS

CMP Model:

A travel demand forecasting model or set of models, maintained by the regional agency (SCAG), SANBAG, or through agreement with another agency, that will provide annual CMP travel demand forecasts for San Bernardino County which are consistent with the regional travel demand forecasting model. Consistent annual forecasts for some less populous portions of the county many be provided by travel demand forecasting methods which are consistent with the CMP model. More detailed local travel demand forecasting models found by SANBAG to be consistent with the CMP model may also be used at the discretion of local jurisdictions to implement provisions of the CMP (Government Code Section 65089.(c)).

Congestion Management Agency (CMA):

From California Government Code Section 65089.(a), the county transportation commission or other public agency designated by the county board of supervisors and the city councils of a majority of the cities representing a majority of the population within the incorporated area of the county. Within San Bernardino County, San Bernardino Associated Governments (SANBAG) is the designated CMA.

Local jurisdiction:

The County of San Bernardino or any city within San Bernardino County. This term is used in place of the word "city" in the California Government Codes referencing Congestion Management Programs. Government Code Section 65088.1(c) states: "City" includes a city and county.

Model consistency:

The ability of a travel demand forecasting model to produce forecasts which are comparable or similar to forecasts produced by the regional and CMP travel demand models for a standard planning horizon (such as 2010), using demonstrably equivalent input data and modeling practice acceptable to the regional agency (Southern California Association of Governments).

Regional agency:

From California Government Code section 65088.1(a), regional agency means the agency responsible for preparation of the regional transportation improvement program (RTIP). For San Bernardino County, this agency is the Southern California Association of Governments (SCAG).

DEFINITIONS (continued)

Responsibility:

Use of this term implies jurisdictional or agency accountability for implementation of a provision of the Congestion Management Program and does not imply any relationship or linkage to the California Environmental Quality Act.

TIA Report:

A Traffic Impact Analysis Report, consistent with the CMP Guidelines, prepared by a local jurisdiction or development project applicant to identify the potential impact of the proposed project and mitigations needed to maintain the traffic level of service on the CMP network, and the mitigation cost.

1. INTRODUCTION

1.A BACKGROUND

Proposition 111, passed in June 1990, provided additional transportation funding through a $.09 per gallon increase in the state gas tax. This equates to an estimated annual return of more than $6.25 per person for cities within San Bernardino County, and $7.1 million for the County.

Included with the provision for additional transportation funding was a requirement to undertake a Congestion Management Program within each county with an urbanized area of more than 50,000 population, to be developed and adopted by a designated Congestion Management Agency (CMA). Within San Bernardino County, SANBAG was designated the CMA by the County Board of Supervisors and a majority of the cities representing a majority of the incorporated population.

The first countywide Congestion Management Program (CMP) was developed by SANBAG and its consultant, in cooperation with a technical advisory committee composed of planning and engineering staff from SANBAG, SANBAG member cities, the County, transit providers, the Southern California Association of Governments (SCAG), the California Department of Transportation (Caltrans), the South Coast Air Quality Management District (AQMD), and the Mojave Desert Air Quality Management District (MDAQMD). It was adopted in November 1992, and was updated in 1993 and 1995.

This document represents the third update of the countywide CMP, and reflects legislative changes enacted by the California Legislature following creation of the original program in 1990.
Although implementation of the Congestion Management Program was made voluntary by the passage of AB 2419 (Bowler), the CMP requirement has been retained in all five urban counties within the SCAG Region. In addition to its value as a transportation management tool, CMP's have been retained in these counties because of the Federal Congestion Management System requirement that applies to all large urban areas that are not in attainment of federal air quality standards. These counties recognize that the CMP provides a mechanism through which locally implemented programs can fulfill most aspects of a regional requirement that would otherwise have to be addressed by the Regional Agency (SCAG). The Federal Department of Transportation has stated that "the State's CMP is a principal element of the CMS."

1.B LEGISLATIVE INTENT AND LEGAL REQUIREMENTS

The California legislature's intent for the CMP is contained in Government Code Section 65088:

> "The Legislature finds and declares all of the following:
>
> (a) Although California's economy is critically dependent upon transportation, its current transportation system relies primarily upon a street and highway system designed to accommodate far fewer vehicles than are currently using the system.
>
> (b) California's transportation system is characterized by fragmented planning, both among jurisdictions involved and among the means of available transport.

(c) The lack of an integrated system and the increase in the number of vehicles are causing traffic congestion that each day results in 400,000 hours lost in traffic, 200 tons of pollutants released into the air we breathe, and three million one hundred thousand dollars ($3,100,000) added costs to the motoring public.

(d) To keep California moving, all methods and means of transport between major destinations must be coordinated to connect our vital economic and population centers.

(e) In order to develop the California economy to its full potential, it is intended that federal, state, and local agencies join with transit districts, business, private and environmental interests to develop and implement comprehensive strategies needed to develop appropriate responses to transportation needs."

The requirements for the CMP were formulated by the legislature to address these concerns.

Definitions of terms used in the statutes are provided in California Government Code Section 65088.1. Explanatory text not included in the Government Code is shown in italics:

(a) Unless the context requires otherwise, "regional agency" means the agency responsible for preparation of the regional transportation improvement program. *Within San Bernardino County, the regional agency is the Southern California Association of Governments (SCAG).*

(b) Unless the context requires otherwise, "agency" means the agency responsible for the preparation and adoption of the congestion management program. *Within San Bernardino County, the agency is SANBAG.*

(c) "Commission" means the California Transportation Commission.

(d) "Department" means the Department of Transportation *(Caltrans).*

(e) "Local jurisdiction" means a city, a county, or a city and county.

(f) "Parking cash-out program" means an employer-funded program under which an employer offers to provide a cash allowance to an employee equivalent to the parking subsidy that the employer would otherwise pay to provide the employee with a parking space. "Parking subsidy" means the difference between the out-of-pocket amount paid by an employer on a regular basis in order to secure the availability of an employee parking space not owned by the employer and the price, if any, charged to an employee for use of that space. A parking cash-out program may include a requirement that employee participants certify that they will comply with the guidelines established by the employer designed to avoid neighborhood parking problems, with a provision that employees not complying with the guidelines will no longer be eligible for the cash-out program.

(g) "Urbanized area" has the same meaning as is defined in the 1990 federal census for urbanized areas of more than 50,000 population.

(h) "Interregional travel" means any trips that originate outside the boundary of the agency.

(i) "Multimodal" means the utilization of all available modes of travel that enhance the

movement of people and goods, including, but not limited to, highway, transit, nonmotorized and demand management strategies including, but not limited to, telecommuting. The availability and practicality of specific multimodal systems, projects, and strategies varies by county and region in accordance with the size and complexity of different urbanized areas.

(j) "Level of service standard" is a threshold that defines a deficiency on the congestion management program highway and roadway system which requires the preparation of a deficiency plan. It is the intent of the Legislature that the agency shall use all elements of the program to implement strategies and actions that avoid the creation of deficiencies and to improve multimodal mobility.

California Government Code Section 65088.3 contains the conditions under which an urbanized county could opt out of State Congestion Management Program requirements:

> "This chapter does not apply in a county in which a majority of the local governments, collectively comprised of the city councils and the county board of supervisors, which in total also represent a majority of the population in the county, each adopt resolutions electing to be exempt from the congestion management program.

California Government Code Section 65088.5 states the requirements for use of Congestion Management Programs to meet federal congestion management system requirements:

> Congestion management programs, if prepared by county transportation commissions and transportation authorities created pursuant to Division 12 (commencing with Section 130000) of the Public Utilities Code, shall be used by the regional transportation planning agency to meet federal requirements for a congestion management system, and shall be incorporated into the congestion management system.

California Government Code Section 65089 states the requirements for Congestion Management Programs:

> "(a) A congestion management program shall be developed, adopted, and updated biennially, consistent with the schedule for adopting and updating the regional transportation improvement program, for every county that includes an urbanized area, and shall include every city and the county. The program shall be adopted at a noticed public hearing of the agency. The Program shall be developed in consultation with, and with the cooperation of, the transportation planning agency, regional transportation providers, local governments, the department, and the air pollution control district or the air quality management district, either by the county transportation commission, or by another public agency, as designated by resolutions adopted by the county board of supervisors and the city councils of a majority of the cities representing a majority of the population in the incorporated area of the county.
>
> (b) The program shall contain all of the following elements:
> (1) (A) Traffic level of service standards established for a system of highways and roadways designated by the agency. The system shall include at a minimum all state highways and principal arterials. No highway or roadway designated as a part of the system shall be removed from the system. All new state

highways and principal arterials shall be designated as part of the system. Level of service (LOS) shall be measured by Circular 212, (or by the most recent version of the Highway Capacity Manual), or by a uniform methodology adopted by the agency which is consistent with the Highway Capacity Manual. The determination as to whether an alternative method is consistent with the Highway Capacity Manual shall be made by the regional agency, except that the department shall make this determination instead if either (I) the regional agency is also the agency, as those terms are defined in Section 65088.1, or (ii) the department is responsible for preparing the regional transportation improvement plan for the county.

(B) In no case shall the LOS standards established be below the level of service E or the current level, whichever is farthest from level of service A. When the level of service on a segment or at an intersection fails to attain the established level of service standard, a deficiency plan shall be adopted pursuant to Section 65089.4.

(2) A performance element that includes performance measures to evaluate current and future multimodal system performance for the movement of people and goods. At a minimum, these performance measures shall incorporate highway and roadway system performance, and measures established for the frequency and routing of public transit, and for the coordination of transit service provided by separate operators. These performance measures shall support mobility, air quality, land use, and economic objectives, and shall be used in the development of the capital improvement program required pursuant to paragraph (5), deficiency plans required pursuant to Section 65089.4, and the land use analysis program required pursuant to paragraph (4).

(3) A travel demand element that promotes alternative transportation methods, including, but not limited to, carpools, vanpools, transit, bicycles, and park-and-ride lots; improvements in the balance between jobs and housing; and other strategies, including, but not limited to, flexible work hours, telecommuting, and parking management programs. The agency shall consider parking cash-out programs during the development and update of the travel demand element.

(4) A program to analyze the impacts of land use decisions made by local jurisdictions on regional transportation systems, including an estimate of the costs associated with mitigating those impacts. This program shall measure, to the extent possible, the impact to the transportation system using the performance measures described in paragraph (2). In no case shall the program include an estimate of the costs of mitigating the impacts of interregional travel. The program shall provide credit for local public and private contributions to improvements to regional transportation systems. However, in the case of toll road facilities, credit shall only be allowed for local public and private contributions which are unreimbursed from toll revenues or other state or federal sources. The agency shall calculate the amount of the credit to be provided. The program defined under this section may require implementation through the requirements and analysis of the California Environmental Quality Act, in order to avoid duplication.

(5) A seven year capital improvement program, developed using the performance measures described in paragraph (2) to determine effective projects that maintain or improve the performance of the multimodal

system for the movement of people and goods, to mitigate regional transportation impacts identified pursuant to paragraph (4). The program shall conform to transportation-related vehicle emissions air quality mitigation measures, and include any project that will increase the capacity of the multimodal system. It is the intent of the Legislature that, when roadway projects are identified in the program, consideration be given to maintaining bicycle access and safety at a level comparable to that which existed prior to the improvement or alteration. The capital improvement program may also include safety, maintenance, and rehabilitation projects that do not enhance the capacity of the system but are necessary to preserve the investment in existing facilities.

(c) The agency, in consultation with the regional agency, cities, and the county shall develop a uniform data base on traffic impacts for use in a countywide transportation computer model and shall approve transportation computer models of specific areas within the county that will be used by local jurisdictions to determine the quantitative impacts of development on the circulation system that are based on the countywide model and standardized modeling assumptions and conventions. The computer models shall be consistent with the modeling methodology adopted by the regional planning agency. The data bases used in the models shall be consistent with the data bases used by the regional planning agency. Where the regional agency has jurisdiction over two or more counties, the data bases used by the agency shall be consistent with the data bases used by the regional agency.

(d) (1) The city or county in which a commercial development will implement a parking cash-out program which is included in a congestion management program pursuant to subdivision (b), or a deficiency plan pursuant to Section 65089.4, shall grant to that development an appropriate reduction in parking requirements otherwise in effect for new commercial development.

(2) At the request of an existing commercial development that has implemented a parking cash-out program, the city or county shall grant an appropriate reduction in the parking requirements otherwise applicable based on the demonstrated reduced need for parking, and the space no longer needed for parking purposes may be used for other appropriate purposes.

California's use of the Congestion Management Program to implement the federal Congestion Management System (CMS) is indicated in Section 65089 (e):

> "Pursuant to the federal Intermodal Surface Transportation Efficiency Act 1991 and regulations adopted pursuant to the act, the department shall submit a request to the Federal Highway Administration Division Administrator to accept the congestion management program in lieu of development of a new congestion management system otherwise required by the act."

The Certification of Management Systems and Workplans, including the CMS workplan, was prepared in a manner consistent with this direction, and was submitted by the department on December 8, 1994. It was accepted by the Federal Highway Administration Division Administrator on April 12, 1995.

Requirements for regional agency review and participation are contained in Government Code Section 65089.2:

> "(a) Congestion management programs shall be submitted to the regional agency. The regional agency shall evaluate the consistency between the program and the regional transportation plans required pursuant to Section 65080. In the case of multicounty regional transportation planning agency, that agency shall evaluate the consistency and compatibility of the programs within the region.
>
> (b) The regional agency, upon finding that the program is consistent, shall incorporate the program into the regional transportation improvement program as provided for in Section 65082. If the regional agency finds the program is inconsistent, it may exclude any project in the congestion management program from inclusion in the regional transportation improvement program.
>
> (c) (1) The regional agency shall not program any surface transportation funds and congestion mitigation and air quality funds pursuant to Section 182.6 and 192.7 of the Streets and Highways Code in a county unless a congestion management program has been adopted by December 31, 1992, as required pursuant to Section 65089. No surface transportation program funds or congestion mitigation and air quality funds shall be programmed for a project in a local jurisdiction that has been found to be in nonconformance with a congestion management program pursuant to Section 65089.5 unless the agency finds that the project is of regional significance.
>
> (2) Notwithstanding any other provision of law, upon the designation of an urbanized area, pursuant to the 1990 federal census or a subsequent federal census, within a county which previously did not include an urbanized area, a congestion management program as required pursuant to Section 65089 shall be adopted within a period of 18 months after designation by the Governor.
>
> (d) (1) It is the intent of the Legislature that the regional agency, when its boundaries include areas in more than one county, should resolve inconsistencies and mediate disputes which arise between agencies related to congestion management programs adopted for those areas.
>
> (2) It is the further intent of the Legislature that disputes which may arise between regional agencies, or agencies which are not within the boundaries of a multicounty regional transportation planning agency, should be mediated and resolved by the Secretary of the Business, Housing and Transportation Agency, or an employee of that agency designated by the secretary, in consultation with the air pollution control district or air quality management district within whose boundaries the regional agency or agencies are located.
>
> (e) At the request of the agency, a local jurisdiction that owns, or is responsible for operation of, a trip-generating facility in another county shall participate in the congestion management program of the county where the facility is located. If a dispute arises involving a local jurisdiction, the agency may request the regional agency to mediate the dispute through procedures pursuant to subdivision (d) of Section 65089.2. Failure to resolve the dispute does not invalidate the congestion management program."

Monitoring of CMP implementation is addressed in Government Code Section 65089.3:

"The agency shall monitor the implementation of all elements of the congestion management program. The department is responsible for data collection and analysis on state highways, unless the agency designates that responsibility to another entity. The agency may also assign data collection and analysis responsibilities to other owners and operators of facilities or services if the responsibilities are specified in its adopted program. The agency shall consult with the department and other affected owners and operators in developing data collection and analysis procedures prior to program adoption. At least biennially, the agency shall determine if the county and cities are conforming to the congestion management program, including, but not limited to, all of the following:

(a) Consistency with levels of service standards, except as provided in Section 65089.4.

(b) Adoption and implementation of a program to analyze the impacts of land use decisions, including the estimate of the costs associated with mitigating these impacts.

(c) Adoption and implementation of a deficiency plan pursuant to Section 65089.4 when highway and roadway level of service standards are not maintained on portions of the designated system.

CMP deficiency plan requirements are specified in Government Code Section 65089.4:

(a) A local jurisdiction shall prepare a deficiency plan when highway or roadway level of service standards are not maintained on segments or intersections of the designated system. The deficiency plan shall be adopted by the city or county at a noticed public hearing.

(b) The agency shall calculate the impacts subject to exclusion pursuant to sudivision (f) of this section, after consultation with the regional agency, the department, and the local air quality management district or air pollution control district. If the calculated traffic level of service following exclusion of these impacts is consistent with the level of service standard, the agency shall make a finding at a publicly noticed meeting that no deficiency plan is required and so notify the affected local jurisdiction.

(c) The agency shall be responsible for preparing and adopting procedures for local deficiency plan development and implementation responsibilities, consistent with the requirements of this section. The deficiency plan shall include all of the following:

(1) An analysis of the cause of the deficiency. This analysis shall include the following:

(A) Identification of the cause of the deficiency.

(B) Identification of the impacts of those local jurisdictions within the jurisdiction of the agency that contribute to the deficiency. These impacts shall be identified only if the calculated traffic level of service following exclusion of impacts pursuant to subdivision (f) indicates that the level of service standard has not been maintained, and shall be limited to impacts not subject to exclusion.

(2) A list of improvements necessary for the deficient segment or intersection to maintain the minimum level of service

otherwise required and the estimated costs of the improvements.

(3) A list of improvements, programs, or actions, and estimates of costs, that will (A) measurably improve multimodal performance, using measures defined in paragraphs (1) and (2) of subdivision (b) of Section 65089, and (B) contribute to significant improvements in air quality, such as improved public transit service and facilities, improved nonmotorized transportation facilities, high occupancy vehicle facilities, parking cash-out programs, and transportation control measures. The air quality management district or air pollution control district shall establish and periodically revise a list of approved improvements, programs, and actions that meet the scope of this paragraph. If an improvement, program, or action on the approved list has not been fully implemented, it shall be deemed to contribute to significant improvements in air quality. If an improvement, program, or action is not on the approved list, it shall not be implemented unless approved by the local air quality management district or air pollution control district.

(4) An action plan, consistent with the provisions of Chapter 5 (commencing with Section 66000), that shall be implemented, consisting of improvements identified in paragraph (2), or improvements, programs, or actions identified in paragraph (3), that are found by the agency to be in the interest of the public health, safety and welfare. The action plan shall include a specific implementation schedule. The action plan shall include implementation strategies for those jurisdictions that have contributed to the cause of the deficiency in accordance with the agency's deficiency plan procedures. The action need not mitigate the impacts of any exclusions identified in subdivision (f). Action plan strategies shall identify the most effective implementation strategies for improving current and future system performance.

(d) A local jurisdiction shall forward its adopted deficiency plan to the agency within 12 months of the identification of the deficiency. The agency shall hold a noticed public hearing within 60 days of receiving the deficiency plan. Following that hearing, the agency shall either accept or reject the deficiency plan in its entirety, but the agency may not modify the deficiency plan. If the agency rejects the plan, it shall notify the local jurisdiction of the reasons for that rejection, and the local jurisdiction shall submit a revised plan within 90 days addressing the agency's concerns. Failure of a local jurisdiction to comply with the schedule and requirements of this section shall be considered to be nonconformance for the purposes of Section 65089.5.

(e) The agency shall incorporate into its deficiency plan procedures a methodology for determining if deficiency impacts are caused by more than one local jurisdiction within the boundaries of the agency.

(1) If, according to the agency's methodology, it is determined that more than one local jurisdiction is responsible for causing a deficient segment or intersection, all responsible local jurisdictions shall participate in the development of a deficiency plan to be adopted by all participating local jurisdictions.

(2) The local jurisdiction in which the deficiency occurs shall have lead responsibility for developing the deficiency plan and for coordinating with other impacting local jurisdictions. If a local jurisdiction responsible for participating in a multi-jurisdictional deficiency plan does not adopt the deficiency plan in accordance with the schedule and requirements of

paragraph (a) of this section, that jurisdiction shall be considered in nonconformance with the program for purposes of Section 65089.5.

(3) The agency shall establish a conflict resolution process for addressing conflicts or disputes between local jurisdictions in meeting the multi-jurisdictional deficiency plan responsibilities of this section.

(f) The analysis of the cause of the deficiency prepared pursuant to paragraph (1) of subdivision (c) shall exclude the following:

(1) Interregional travel.

(2) Construction, rehabilitation, or maintenance of facilities that impact the system.

(3) Freeway ramp metering.

(4) Traffic signal coordination by the state or other multijurisdictional agencies.

(5) Traffic generated by the provision of low and very low income housing.

(6) (A) Traffic generated by high density residential development located within one-fourth of a mile of a fixed rail passenger station.

(B) Traffic generated by any mixed use development located within one-fourth of a mile of a fixed rail passenger station, if more than half of the land area, or floor area, of the mixed use development is used for high density housing, as determined by the agency.

(g) For the purposes of this section, the following terms have the following meanings:

(1) "High density" means residential density development which contains a minimum of 24 dwelling units per acre and a minimum density per acre which is equal to or greater than 120 percent of the maximum residential density allowed under the local general plan and zoning ordinance. A project providing a minimum of 75 dwelling units per acre shall automatically be considered high density.

(2) "Mixed use development" means development which integrates compatible commercial or retail uses, or both, with residential uses, and which, due to the proximity of job locations, shopping opportunities, and residences, will discourage new trip generation."

The procedure for and penalties associated with a determination of nonconformance are stated in Government Code Section 65089.5:

"(a) If, pursuant to the monitoring provided for in Section 65089.3, the agency determines, following a noticed public hearing, that a city or county is not conforming with the requirements of the congestion management program, the agency shall notify the city or county in writing of the specific areas of nonconformance. If, within 90 days of the receipt of the written notice of nonconformance, the city or county has not come into conformance with the congestion management program, the governing body of the agency shall make a finding of nonconformance and shall submit the finding to the commission and to the Controller.

(b) (1) Upon receiving notice from the agency of nonconformance, the Controller shall withhold apportionments of funds required to be apportioned to that nonconforming city or county by Section 2105 of the Streets and Highways Code.

(2) If, within the 12-month period following the receipt of a notice of nonconformance, the Controller is notified by the agency that the city or county is in conformance, the Controller shall allocate

> the apportionments withheld pursuant to this section to the city or county.
> (3) If the Controller is not notified by the agency that the city or county is in conformance pursuant to paragraph (2), the Controller shall allocate the apportionments withheld pursuant to this section to the agency.
>
> (c) The agency shall use funds apportioned under this section for projects of regional significance which are included in the capital improvement program required by paragraph (5) of subdivision (b) of Section 65089, or in a deficiency plan which has been adopted by the agency. The agency shall not use these funds for administration or planning purposes."

The relationship between the CMP and general plan conformity is addressed by Government Code Section 65089.6:

> "Failure to complete or implement a congestion management program shall not give rise to a cause of action against a city or county for failing to conform with its general plan, unless the city or county incorporates the congestion management program into the circulation element of its general plan."

Certain developments are exempted from actions associated with the congestion management program by Government Code Section 65089.7:

> "A proposed development specified in a development agreement entered into prior to July 10, 1989, shall not be subject to any action taken to comply with this chapter, except actions required to be taken with respect to the trip reduction and travel demand element of a congestion management program pursuant to paragraph (3) of subdivision (b) of Section 65089."

Portions of the Government Code which provide insight or guidance to elements of the CMP, are restated within the appropriate CMP chapters.

1.C GOALS OF THE CONGESTION MANAGEMENT PROGRAM

The goals of the San Bernardino County Congestion Management Program are:

- Goal 1 - Maintain or enhance the performance of the multimodal transportation system, and minimize travel delay.
- Goal 2 - Assist in focusing available transportation funding on cost-effective responses to subregional and regional transportation needs.
- Goal 3 - Provide for technical consistency in multimodal transportation system analysis.
- Goal 4 - Help to coordinate development and implementation of subregional transportation strategies across jurisdictional boundaries.
- Goal 5 - Anticipate the impacts of proposed new development on the multimodal transportation system, provide consistent procedures to identify and evaluate the effectiveness of mitigation measures, and provide for adequate funding of mitigations.
- Goal 6 - Promote air quality and improve mobility through implementation of land use and transportation alternatives or incentives

that reduce both vehicle trips and miles traveled, and vehicle emissions.

The CMP also incorporates the goals of the regional transportation plan. These are:

- Meet the regional and subregional mobility and access needs of increased employment and population while reducing congestion to 1990 levels of performance or better and enhancing goods movement.
- Ensure that transportation investments are cost effective, protect the environment, promote energy efficiency, and enhance the quality of life.
- Serve the transportation needs of everyone including the transit dependent, elderly, handicapped, and disadvantaged, for safe, reliable, and economical service.
- Develop regional transportation solutions that complement subregional transportation systems and serve the needs of subregions, cities and communities.
- Promote transportation strategies that are innovative and market based, encourage new technologies, and support the Southern California economy.

Additional policies and actions related to each CMP element are identified within the appropriate chapters.

1.D ELEMENTS OF THE CONGESTION MANAGEMENT PROGRAM

To meet these goals and the statutory requirements, the CMP includes the following elements:

- System Level of Service Element. Defines the CMP system of roadways, designates level of service standards for the system, and establishes procedures to be used to calculate level of service.
- Performance Measures Element. Identifies performance measures used to characterize the performance of the multimodal transportation system, including standards for transit routing and frequency, and standards for the coordination of transit service provided by separate operators. Performance measures identified in this element are to be used in development of the capital improvement program, deficiency plans, and the land use analysis program.
- Land Use/Transportation Analysis Element. Provides a consistent method for analyzing the impacts of land use decisions on the CMP transportation system, and estimating the cost of mitigation.
- Travel Demand Element. Provides guidance for travel demand management ordinances enacted by local jurisdictions.
- Seven-year Capital Improvement Program. Contains improvements that maintain or improve traffic and transit performance and mitigate impacts on the regional system identified by the land use/transportation analysis program, deficiency plans, and other forecasting and analysis elements of the CMP.

Two additional components of the CMP support the five elements. First, the Congestion Management Agency is required to develop a uniform database on traffic impacts, consistent with the regional (Southern California Association of Governments) database, for use in the countywide transportation computer model. The CMA is also required to

approve computer models of specific areas that are used by local jurisdictions to determine the impacts of land use changes which add trips on the circulation system.

Monitoring is also an essential component of the CMP process. The local jurisdictions, Air Districts, Caltrans, and the CMA have monitoring responsibilities within the CMP framework. The CMA's responsibility is focused on assisting and ensuring compliance by local jurisdictions with the CMP requirements.

1.E THE CMA's APPROACH TO THE CONGESTION MANAGEMENT PROGRAM

The CMA's approach to the CMP in San Bernardino County is to maximize opportunities for local governments, the CMA, Caltrans and other planning and engineering agencies to implement efficient, comprehensive, multimodal transportation planning at a subregional scale to better focus transportation funding where needs are greatest, while minimizing procedural complications and redundancy. The intent is to make the planning and programming process more effective through consistent use and consolidation of existing processes wherever possible.

The CMP grants no land use authority to any regional agency, including the CMA. The process is unlikely to jeopardize local gas tax subventions unless cities or the County choose not to address deficiencies through preparation and implementation of deficiency plans. The program is designed to provide advance notice of potential transportation problems through two separate mechanisms: one which focuses on traffic forecasting and one which identifies impacts of land use decisions and evaluates available mitigations and their costs. The deficiency plan framework also provides local governments with opportunities to address deficiencies in a variety of ways, some of which are systemic and less capital-intensive than the traditional "add-a-lane" approach to mitigation.

Traffic congestion, long commutes, and smog have long been identified by many residents of San Bernardino County as among the most serious issues threatening our quality of life. Since 1984, the population of San Bernardino County has increased more than 60 percent. In the same period, State highway lane miles in the County have increased about 2.5 percent. Several freeway segments now have peak period speeds less than 25 miles per hour, and operate at traffic level of service (LOS) F. Discussions with agencies in San Bernardino County have indicated that factors such as inadequate coordination between land use and transportation planning, lack of coordination and consistency among plans and activities of neighboring jurisdictions, and failure to mitigate interjurisdictional impacts have contributed to these problems. The CMP is a means to directly address these problems. It reinforces the land use/transportation linkage and promotes interjurisdictional planning, with the goal of maintaining or improving the performance of the regional transportation system while meeting air quality objectives.

While the CMP requires consideration of interjurisdictional transportation issues and provides for technical consistency among the various transportation planning efforts in progress, it is a transportation tool kit, not a transportation blueprint or plan. Instead, statute intends the Regional Transportation Plan (RTP) to be that blueprint, with the CMP as the subregional implementation mechanism for the Plan. The one element of the CMP in which planning is required, the deficiency plan, has purposely been defined flexibly in statute, to encourage the most appropriate solutions to unique local problems, as long as they are consistent with the RTP.

The sheer scale of the region addressed by SCAG's RTP necessitates that its scope is restricted to regionally significant transportation facilities,

programs, and issues. However, beginning with the 1994 RTP and continuing with the 1998 and 2001 RTPs, SCAG has solicited more detailed input from Transportation Commissions, subregional agencies, and local governments. In response, SANBAG has undertaken preparation of a countywide Comprehensive Transportation Plan designed to address local, as well as regional transportation issues affecting San Bernardino County. Recognizing that the Comprehensive Transportation Plan provides a forum through which all jurisdictions and interests can participate in collectively developing long-term, subarea-level transportation strategies to be implemented through the CMP, the SANBAG Board of Directors acted in October 1994 to provide policy direction that the Comprehensive Transportation Plan should define the actions to be implemented through locally adopted deficiency plans.

1.F CMP BENEFITS AND RESPONSIBILITIES

The Congestion Management Program benefits the regional transportation system, local planning efforts, and air quality by:

- Defining the existing and future regional multimodal transportation system, and objectively evaluating proposed improvements using standardized methods.
- Providing a process to relate land use and transportation plans, analyze the impacts of land use changes which add trips or miles traveled to the regional transportation system, and provide for interjurisdictional communication and coordination.
- Providing for a countywide database of transportation information, including traffic counts and travel demand forecasts, available to each jurisdiction to support planning activities.
- Requiring periodic monitoring of the performance of the multimodal transportation system, including standardized level of service analysis procedures, and report formats that will provide information on current roadway and transit operations. In addition, a consistent approach to travel demand forecasting will be used throughout the county to evaluate future system performance. These tools provide decision makers with knowledge needed to more effectively evaluate proposed improvements on the regional transportation system.
- Providing a basis for selecting and implementing those transportation programs that provide the greatest performance and air quality benefits.
- Providing a forum for local jurisdictions, the CMA, Caltrans, and air districts to cooperatively identify opportunities to improve regional transportation system performance and air quality. The CMP process also enhances communication and coordination between local jurisdictions and Caltrans on development activities or improvements adjacent to state highways.
- Providing a procedural framework within which regional and long-range transportation planning and programming can be accomplished comprehensively in coordination with all jurisdictions.

The Congestion Management Program imposes responsibilities on the CMA and the local jurisdictions, as well as explicit or implicit penalties for failure to fulfill the responsibilities. The CMA is required to:

- Develop, update, and monitor implementation of the Congestion Management Program.

- Ensure that the County and cities are in conformance with the CMP through use of consistent methods, maintenance of performance standards or adoption and implementation of deficiency plans, implementation of travel demand management strategies, and adoption and implementation of a program to analyze the impacts of land use decisions on the transportation system, including estimates of costs to mitigate the impacts.

- Through the monitoring program, ensure that the performance standards on the CMP system are maintained, or that deficiency plans to improve system performance or return to the designated standard are prepared and implemented by the local jurisdictions.

The local jurisdictions' responsibilities include:

- Use consistent LOS calculation methodologies, performance standards, and travel forecasting techniques.

- Implement the land use/transportation analysis program.

- Participate in annual monitoring activities, maintain acceptable performance levels on the CMP system of roadways, or if necessary, prepare, adopt, and implement an areawide Deficiency Plan.

Failure of local jurisdictions to fulfill these responsibilities would be grounds for loss of state gas tax funding.

1.G ORGANIZATION OF THE CMP

The CMP consists of the elements defined above. In addition to chapters addressing these elements, additional chapters are provided, plus several appendices. Following the introduction, the CMP document is organized as follows:

- Chapter Two - System Level of Service Element (The CMP Transportation System, including the designated CMP System of Roadways)

- Chapter Three - The Performance Measures Element (The criteria used to determine multimodal transportation system performance, and to select the strategies to be implemented as part of the CMP Transportation Program. This chapter also includes the CMP Level of Service (LOS) standards and procedures to calculate traffic LOS).

- Chapter Four - Land Use/Transportation Analysis Program (A consistent approach to identifying the impact of land use changes on the regional transportation system, possible mitigations, and their costs)

- Chapter Five - Travel Demand Management Element

- Chapter Six - Capital Improvement Program Element

- Chapter Seven - Monitoring and Transportation Modeling

- Chapter Eight - Deficiency Plans

- Appendix A - Level of Service Analysis Procedures and Monitoring Results

- Appendix B - California Government Codes Referencing the CMP
- Appendix C - Guidelines for Traffic Impact Analysis Reports
- Appendix D - Guidelines for Preparing Deficiency Plans
- Appendix E - CMP Capital Improvement Program
- Appendix F - Conflict Resolution Procedure

Most chapters are structured according to the following format:

- Legal Requirements
- Objectives, Policies, and Actions
- Benefits
- Implications
- The Process
- Agency Responsibilities

Variations in this format are occasionally necessary to address the unique needs of a specific element or process.

1.H SUMMARY OF THE SAN BERNARDINO COUNTY CMP

Chapters 2 through 8, plus the appendices, comprise the remainder of the San Bernardino County CMP. Each chapter contains background information and the approach to the specific element. This summary provides a synopsis of each component of the CMP.

One of the significant benefits of implementing the CMP is the identification of cost-effective improvements and strategies for mitigation of performance problems on the CMP system. Figure 1-1 indicates the process leading to the identification of the mitigation plans and inclusion into the capital improvements program. Plans for the mitigation of performance problems on the system can come from several sources: Traffic Impact Analysis Reports, annual CMP modeling, and most importantly, from areawide deficiency plans. There is extensive interaction among the components of the CMP. The summary presented below lists program components and describes their interrelationships:

- Congestion Management Agency (CMA). SANBAG was designated as the CMA in August 1990.
- The CMP System of Roads. The system includes approximately 1500 miles of State highways and principal arterials. Approximately 500 miles of the roadway system are in the Valley Region and 176 miles are in the Victor Valley Region. The principal arterials were identified through input from local jurisdictions. Future additions to the CMP road system will be based on local recommendations.
  The term "CMP intersection" refers to the intersections of two CMP roadways. "Key intersections" include all CMP intersections plus other intersections on CMP links considered to be important for level of service monitoring. There are approximately 370 key intersections on the CMP roadway system.
- Level of Service Standards. The adopted level of service standards for the CMP system are the minimum standards allowed in California Government Code Section 65089(b)(1)(B): level of service E for all

segments and intersections except those designated level of service F in Chapter 2 of the CMP. In addition, a provision is made for any level of service F facility not to deteriorate greater than 10 percent below its level of service value at the time of initial CMP adoption. This provision is included to avoid dismissal of a serious congestion problem. In addition, a discussion of differential level of service standards for "transit/TDM emphasis areas" is included in Chapter 2. Lower traffic levels of service could be employed within these areas if combinations of modal alternatives, higher land use intensity, mixed uses, and compact land development patterns suggest that the multimodal transportation system could perform adequately in those areas, even with lower traffic levels of service. This concept is consistent with the statutory exemptions provided for in Government Code Section 65089.3(c)(6), and can be implemented through the deficiency plan process.

- Level of Service Procedures. The procedures in the 2000 Highway Capacity Manual (HCM) are adopted as the level of service procedures for the San Bernardino County CMP. In addition to the HCM, if the V/C of the critical movements is equal to or greater than 1.0, the intersection is considered to operate at level of service F. The 1988 Florida Department of Transportation Generalized Peak Hour/Peak Direction Level of Service tables are accepted for calculation of segment level of service. Provisions are also made for more advanced analysis techniques to be adopted in the future, such as traffic signal timing programs for arterials, and freeway simulation models for limited access facilities. The use of these advanced techniques will be at the discretion of each local jurisdiction.

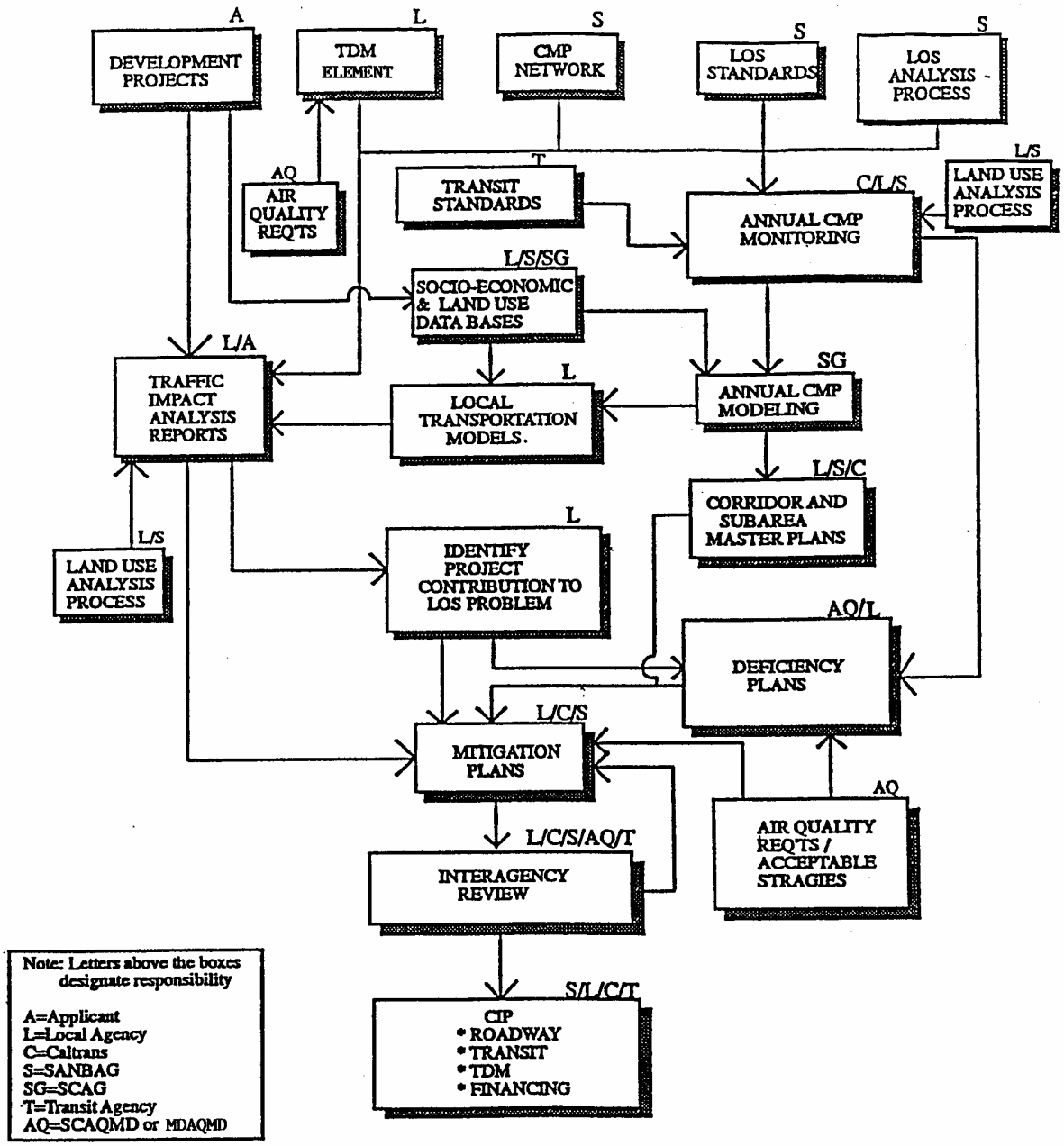


Figure 1-1. CMP Proccess Leading to Impact Mitigation and the Capital Improvement Program

- Performance Measures Element. Past CMP's were required to establish traffic level of service standards for the CMP system of roads, and also contained a separate transit element which established transit standards for routing, frequency, and coordination in relation to specific corridors, activity centers, and sites with more than 100 employees. The transit element also emphasized peak period service, in keeping with the objectives of congestion management, while maintaining sufficient levels of off-peak service for local mobility needs and transit-dependent ridership. It also identified commuter rail stations and express bus terminals as important focal points of transit activity, with planning for bus feeder service and encouragement of transit-oriented development. The new performance measures element retains the components of the former transit element, but refocuses attention on measures of multimodal system performance which allow consideration and comparison of modal alternatives in ways that were not possible when only mode-specific performance measures were used in the CMP. The performance measures specified in this element are also to be used in the land use analysis program, in project identification for the capital improvement program, and in determining the effectiveness of deficiency plan strategies in improving systemwide transportation performance.

- The State of the System. The CMP provides a biennial report on the state of the CMP transportation system in San Bernardino County. As of 2001, the State of the System was as follows:

  - Freeways - LOS F is experienced on portions of I-10, I-215 and SR 60 in the AM and PM peak periods.

  - Valley Region Principal Arterials - Of the 382 intersections monitored, 192 are under State jurisdiction. The most serious level of service problems are in the PM peak hour. There are currently 12 intersections at LOS E or F in the PM peak period. In the AM peak hour, 7 intersections are at E or F. 11 of the LOS E and F intersections are in the West Valley, and the majority is monitored on state highways.

  - Victor Valley Principal Arterials - Of the 48 intersections, 30 are under State jurisdiction. One is currently at LOS E or F in the AM and four in the PM peak period. Special cases exist, for example, during peak skiing weekends when other roadways, such as U.S. 395, are heavily congested by interregional traffic.

  - Other areas - The next most serious LOS problems are seasonal in nature, particularly the weekend congestion on SR 330 to and from mountain ski areas. Special studies are in progress to address these issues.

  - Commuting patterns - Origin/destination information from Commuter Transportation Services indicates widely dispersed commuting patterns in San Bernardino County. However, "corridors of opportunity" exist, and these can be used to advantage

in focusing transit and TDM strategies.

- Land Use/Transportation Analysis Program. The emphasis of the Land Use/Transportation Analysis Program in earlier CMP's is individual project review. Linkages between this element, deficiency plans, and a comprehensive transportation plan which includes an assessment of funding shortfalls and identification of funding sources and strategies needed to complete the future transportation system, are expected to provide the basis of an improved land use/transportation analysis program. This will be incorporated into the CMP as areawide deficiency plans near completion and their relationship to an ongoing land use monitoring program is established.

  A key element of the current Land Use/Transportation Analysis Program is the Traffic Impact Analysis Report (TIA Report), to be prepared by local jurisdictions. The TIA Reports are designed to provide an improved basis for assessing the impacts of land use decisions on the regional transportation system, both within and outside the permitting jurisdictions, by providing a consistent format to identify impacts and mitigations, and to evaluate mitigation costs. All TIA Reports prepared by local jurisdictions shall be copied to the CMA. TIA reports shall be prepared for projects when required by local thresholds and criteria, but must be prepared for land use decisions that are equal to or greater than half the thresholds for regional review defined by the California Environmental Quality Act (CEQA). These thresholds are defined in Chapter 4. Several land use decisions in proximity to one another may be evaluated through a single TIA Report. The Land Use/Transportation Analysis Program is a significant tool within the CMP framework, along with the annual modeling, to anticipate and plan for future transportation improvements. In addition to the evaluation of specific development projects, land use decisions to be evaluated include general plan amendments and specific plans which exceed the threshold as determined by the number of new trips added to the transportation system. It is important that the program implemented by the local jurisdictions be applied consistently so that the analyses of potential impacts of land use decisions on the system of CMP roadways are as fair and equitable as possible.

- Annual CMP Forecasts. Periodic forecasts of future travel demand on the CMP roadway system are conducted using the CMP (CTP) model. Although the statutory CMP planning horizon is seven years, the CMP for San Bernardino County has consistently taken a longer view, to the year 2010 in the initial CMP and to 2015 or 2020 in this update. Given the complex fiscal and environmental hurdles that must be overcome prior to implementation of most transportation projects or programs, and the time required to complete the many of the regionally significant development projects which will determine many of the future transportation needs, a 20-year planning horizon (with interim forecasts as well) is the minimum needed to assure the necessary lead time.

- The Countywide Transportation Model and Data Base. The CMP models in San Bernardino County are consistent with the SCAG regional model, and local models need to be consistent with the CMP model. All or portions of the CMP model can be made available to jurisdictions developing local models. Local models will normally

be used as the basis for local traffic impact analysis reports, analysis for general plan updates and revisions, and localized corridor studies. Local models must cover sufficient area to be able to analyze the impacts of development on all CMP roadways, including those impacts that occur outside the jurisdictional boundaries. A memorandum prepared by SCAG, entitled "Guidelines for Local Transportation Model Development and Consistency in Riverside and San Bernardino Counties," will serve as the basis for maintaining an updated, consistent model data base.

- Travel Demand Management Element. The element is intended to provide guidance to local jurisdictions. Each local jurisdiction must consider travel demand management strategies to meet CMP requirements.

- Deficiency Plans. To remain in compliance with the CMP, a deficiency plan must be prepared, adopted, and implemented by local jurisdictions who contribute to situations in which a portion of the CMP road system falls below the level of service standard, as determined from the annual monitoring. The local jurisdiction in which the deficiency occurs is the lead agency, but the cost of and responsibility for plan preparation and implementation is to be shared among the agencies shown to be contributing to the deficiency. The SANBAG Board of Directors has provided policy guidance indicating that deficiencies should be addressed through areawide, rather than facility-specific deficiency plans, and that the actions to be implemented should be based directly on the Comprehensive Transportation Plan. In areas where State highways are involved, the deficiency plans must be prepared in conjunction with Caltrans.

- Conflict Resolution Procedure. A Conflict Resolution Procedure is included as Appendix G to provide administrative remedies to interjurisdictional problems that may arise related to impact analysis, definition of mitigations, and funding of mitigations on the CMP system.

- Monitoring Program. The monitoring program involves several activities: annual collection of traffic and roadway data, level of service analysis and reporting for the CMP, monitoring of transit system performance, and SANBAG monitoring of various elements of CMP implementation. The program takes advantage of existing resources within Caltrans and local jurisdictions and focuses on critical intersections and segments. All jurisdictions will participate in the collection of traffic data, with emphasis on intersection turning movement counts. Intersections within one LOS increment of the standard are to be counted every year. Other key intersections should be counted every third year, unless these intersections are determined to be in a high growth area, in which case they should be counted more frequently. The monitoring program will also collect regular information on traffic growth using control station counts. The CMA is legally obligated to monitor maintenance of LOS on the CMP road system, adoption and implementation of a trip reduction/travel demand ordinance, and implementation of the land use analysis program by local jurisdictions. Caltrans and local jurisdictions will conduct traffic counts and level of service analyses for annual CMP updates and provide the results to the CMA.

- Capital Improvement Program. Capital projects and operational improvements will

be identified through the annual modeling, subsequent corridor/subarea studies, TIA Reports, deficiency plans and other evaluations conducted by local jurisdictions, Air Districts, and Caltrans. Projects will be developed by each local jurisdiction and annually submitted to the CMA for inclusion into the CIP. Projects for inclusion in the Regional Transportation Improvement Program (RTIP) will be separately identified. Projects on non-CMP roadways may be included if they are shown to significantly improve a level of service deficiency on a CMP roadway.

1. CMP EVENTS

The CMP imposes certain obligations on all agencies involved. Some of these are set on an annual schedule. Others are driven by specific events, such as a development application. A summary of CMP scheduled and non-scheduled events is presented below:

Scheduled Events

By December 1 of odd-numbered years - CMP readoption

January 1 of Each Year

- Annual CMP modeling begins.

By April 1 of Each Year

CMP Traffic Counts Conducted.

- Turning movements (AM/PM peak periods) for all LOS D, E, or F intersections.
- For one third of others (local jurisdiction selects).
- Other intersections updated with growth factors.
- New counts on approximately 150 intersections (six to seven per jurisdiction, on average).

Draft CMP Forecasts Developed.

- The CMA/SCAG produce using the CMP model.
- Local jurisdictions may produce their own more detailed forecasts and submit to the CMA.
- Identify intersections and segments forecast to become deficient and ensure that they are addressed through existing deficiency plans.
- If intersections or segments forecast to become deficient in the near term are not in deficiency plan areas, initiate deficiency plan preparation.

By May 1 of Each Year

LOS Analyses Submitted to the CMA by Local Jurisdictions (Jurisdictions Work with Caltrans on State Highway LOS).

- May use computer files from previous CMP.
- Jurisdictions identify deficient intersections and segments, if any, which are not located within deficiency plan areas.
- Jurisdictions may verify deficient intersections and segments using travel time runs.

Status of Local Jurisdiction CMP Activity Submitted to the CMA.

- Summary of CMP-reviewed development projects.
- Summary of TDM-related activity.
- Summary of transit activities and relationship to standards.

By June 1 of RTIP Years

- Local jurisdictions and Caltrans submit CMP CIP projects to the CMA.
- Include any capital project that improved level of service on CMP road system, independent of funding.
- Jurisdictions and the CMA identify RTIP projects within the overall CMP CIP.
- Local jurisdictions submit information on the implementation of TDM measures.

By June 1 of Each Year (until Deficiency Plans are adopted)

- Identify deficient intersections.

By July 1 of RTIP Years

The CMA compiles CMP Report.

- LOS analysis results and comparison with prior years.
- Identification of existing deficient intersections and segments.
- Summary of modeling and identification of intersections and segments forecast to become deficient.
- Action plan for corridor and subarea studies, committee activities, etc..
- Summary of other local jurisdiction CMP activity.
- Additions to the roadway system, if any.
- Changes to LOS standards, if any.

By November of RTIP Years

- CMA approval of CMP.

By November 1

Deficiency plans submitted to the CMA by local agencies.

- Identify causes of deficiency using modeling and prior TIA reports.
- Analyze exclusions:
  - Some may eliminate the need for plan.
- Based on the Comprehensive Transportation Plan, identify strategies to either maintain the traffic level of service at the CMP standard or better, or to provide system-level performance improvements and air quality benefits.
- Identify cost of mitigations.
- Formulate action plan, including implementation schedule.
- Plan will serve as input to CIP.

In November of Each Year

- Annual determination of conformance

CMP Non-Scheduled Events

TIA Reports.

- Triggered by application for development project, specific plan or significant update or amendment to general plan.

- Jurisdictions copy TIA Reports to the CMA, Caltrans, Air Districts, and impacted jurisdictions, based on criteria established in CMP.

- Identify cost to mitigate project impacts, regardless of location.

- Through Comprehensive Transportation Plan, identify transportation funding needs and shortfalls, and develop strategies to fully fund necessary facilities or programs.

- Through the CMP TAC, develop updated land use/transportation analysis procedures applicable to parts of the county where areawide deficiency plans are implemented. The updated procedures are expected to focus on assessment of the consistency of actual development with the growth assumptions underlying the Comprehensive Transportation Plan (CTP), modification of CTP strategies as needed, and phased implementation of the CTP based on the rates of development within the various areas of the County.

2. SYSTEM LEVEL OF SERVICE ELEMENT (THE CMP ROADWAY SYSTEM, LEVEL OF SERVICE STANDARDS, AND LEVEL OF SERVICE PROCEDURES)

The first element of the CMP defines the CMP roadway system, establishes traffic level of service standards on the system, and prescribes procedures for computing traffic levels of service. This chapter is organized to indicate legislative requirements, objectives/policies/actions, and related processes.

2.A LEGAL REQUIREMENTS

California Government Code Section 65089. (b) (1) states that the Level of Service Element shall contain:

> "(A) Traffic level of service standards established for a system of highways and roadways designated by the agency. The system shall include at a minimum all State highways and principal arterials. No highway or roadway designated as a part of the system shall be removed from the system. All new State highways and principal arterials shall be designated as part of the system. Level of service (LOS) shall be measured by Circular 212, (or by the most recent version of the Highway Capacity Manual), or by a uniform methodology adopted by the agency which is consistent with the Highway Capacity Manual. The determination as to whether an alternative method is consistent with the Highway Capacity Manual shall be made by the regional agency, except that the department shall make this determination instead if either (I) the regional agency is also the agency, as those terms are defined in Section 65088.1, or (ii) the department is responsible for preparing the regional transportation improvement plan for the county.
>
> (B) In no case shall the LOS standards established be below the level of service E or the current level, whichever is farthest from level of service A. When the level of service on a segment or at an intersection fails to attain the established level of service standard, a deficiency plan shall be adopted pursuant to Section 65089.4."

2.B LEVEL OF SERVICE DEFINITIONS

The current technical guide to the evaluation of roadway level of service is the 2000 Highway Capacity Manual (HCM) . The 2000 HCM defines level of service as a qualitative measure which describes operational conditions within a traffic stream, generally in terms of such factors as speed and travel time, freedom to maneuver, traffic interruptions, comfort and convenience, and safety. The criteria used to evaluate LOS conditions vary based on the type of roadway and whether the traffic flow is considered interrupted or uninterrupted.

The definitions of level of service for uninterrupted flow (flow unrestrained by the existence of traffic control devices) can be summarized as follows:

- LOS A represents free flow. Individual users are virtually unaffected by the presence of others in the traffic stream.
- LOS B is in the range of stable flow, but the presence of other users in the traffic stream begins to be noticeable. Freedom to select desired speeds is relatively unaffected, but there is a slight decline in the freedom to maneuver.
- LOS C is in the range of stable flow, but marks the beginning of the range of flow in which the operation of individual users becomes significantly affected by

interactions with others in the traffic stream.

- LOS D represents high-density but stable flow. Speed and freedom to maneuver are severely restricted, and the driver experiences a generally poor level of comfort and convenience.

- LOS E represents operating conditions at or near the capacity level. All speeds are reduced to a low, but relatively uniform value. Small increases in flow will cause breakdowns in traffic movement.

- LOS F is used to define forced or breakdown flow. This condition exists wherever the amount of traffic approaching a point exceeds the amount which can traverse the point. Queues form behind such locations.

The definitions of level of service for interrupted traffic flow (flow restrained by the existence of traffic signals and other traffic control devices) differ slightly depending on the specific element of the roadway being considered, e.g., signalized intersections versus arterial segments. The level of service criteria for signalized intersections are:

- LOS A - describes operations with average intersection stopped delay (how long a driver must wait at a signal before the vehicle can begin moving again) of five seconds or less.

- LOS B - average stopped delay between 5.1 and 15.0 seconds per vehicle.

- LOS C - average stopped delay between 15.1 and 25.0 seconds per vehicle.

- LOS D - average stopped delay between 25.1 and 40.0 seconds per vehicle.
- LOS E - average stopped delay between 40.1 and 60.0 seconds per vehicle.

- LOS F - average stopped delay greater than 60.0 seconds per vehicle.

An intersection is also designated as F when the volume/capacity ratio of the critical movements is equal to or greater than 1.0.

The level of service criteria for arterial segments with free flow speeds (typical traffic speed between intersections) of 40 miles per hour are:

- LOS A - arterial speeds (including intersection delay) greater than 35 mph.

- LOS B - arterial speeds 28.0 to 34.9 mph

- LOS C - arterial speeds 22.0 to 27.9 mph

  LOS D - arterial speeds 17.0 to 21.9 mph

- LOS E - arterial speeds 13.0 to 16.9 mph

- LOS F - arterial speeds less than 13.0 mph

The level of service criteria for arterials with typical free flow speeds of 33 miles per hour provide for lower thresholds of speed than those shown above. Level of service criteria for typical free flow speeds of 27 mph should not be used for principal arterials.

2.C LOS STANDARD DEFINITION AND PURPOSE

California Government Code Section 65088.1(j) discusses the meaning of the CMP level of service standard:

'Level of service standard' is a threshold that defines a deficiency on the congestion management program highway and roadway system which requires the preparation of a deficiency plan. It is the intent of the Legislature that the agency shall use all elements of the program to implement strategies

and actions that avoid the creation of deficiencies and to improve multimodal mobility."

2.D OBJECTIVES, POLICIES, AND ACTIONS

The objectives express the element's basic intent. Policies are guidelines to achieve the objective. Actions are the steps to be taken by the appropriate agencies to implement policies and advance toward the objectives.

Objective 2.1 Maintain and, as needed, update the CMP system of highways and roadways.

Policy 2.1.1 - Use the functional definitions in this chapter and input from local jurisdictions as guidance for the inclusion of additional or new principal arterials on the CMP roadway system in the future.

Action Implement Policy 2.1.1.
RESPONSIBILITY: Local jurisdictions and the CMA Board.

Objective 2.2 Maintain and apply the level of service analysis procedures that best reflect actual system performance.

Policy 2.2.1 - Establish the most current version of the Highway Capacity Manual, published by the Transportation Research Board, as the standard for level of service analysis procedures for use in all CMP related LOS computations.

Action Implement Policy 2.2.1.
RESPONSIBILITY: CMA Board and local jurisdictions.

Action Provide supporting materials and data to local jurisdictions to allow for the most effective application of the procedures.
RESPONSIBILITY: CMA coordinates, Caltrans and local jurisdictions supply data.

Action Provide a description of the adopted capacity analysis procedures, update the procedures as required, and distribute the information to local jurisdictions and Caltrans.
RESPONSIBILITY: CMA

Objective 2.3 Set level of service standards that provide a reasonable balance between mobility and the cost of building and operating the transportation system.

Policy 2.3.1 - Establish level of service E or the current level, whichever is farthest from LOS A, as the LOS standard for intersections or segments on the CMP system of roadways.

If the 1992 LOS was F (see Table 2-1), then a 10 percent or more degradation in the quantitative measure used to determine the LOS (such as delay, V/C, or travel speed) will comprise a deficiency, which must be addressed by a deficiency plan.

Action Implement Policy 2.3.1.
RESPONSIBILITY: CMA Board and local jurisdictions.

2.E BENEFITS OF THE SYSTEM LEVEL OF SERVICE PROGRAM

The CMP system level of service element provides the following benefits:

- Defines a system of roadways that is a basis for implementing the provisions of the Congestion Management Program.

- Serves as a basis for other countywide transportation planning and programming activities.

- Creates a set of consistent, quantitative procedures for defining system deficiencies, helping to evaluate the impacts of land use decisions, and evaluating potential roadway improvements. The procedures provide a tool for evaluating the balance between land use and transportation system capacity.

- Provides a definition of "principal arterial" to be used in updates of the CMP system and for other transportation planning purposes.

2.F CMP ROADWAY SYSTEM

2.F.1 DEFINITION OF PRINCIPAL ARTERIAL

The CMP system is required to include, at a minimum, all State highways and principal arterials. The system to be used for CMP modeling (discussed in Chapter 8) is required to include the System of Regional Significance identified within the Regional Transportation Plan. "Principal arterial" is not defined in the CMP legislation. As part of the development of the CMP for San Bernardino County, a working definition of principal arterial was developed by CMA staff:

> Principal arterials are roadways that are of multi-jurisdictional or regional significance. This means that during both peak and off-peak periods, the roadway is likely to carry traffic across city or county boundaries, or within a given jurisdiction is likely to carry a significant proportion of non-local traffic. Additional criteria for principal arterials are:
>
> - Freeways, other State highways, and major projections of those roadways.
>
> - Major roadways leading to or from a freeway interchange.
>
> - Major roadways that provide direct links between freeways and State highways.
>
> - A major roadway that is designated a principal arterial by the local jurisdiction.
>
> This definition is provided for guidance only. The CMP principal arterials are non-State roadways shown in Figures 2-1 through 2-3. The addition of other roadways may be requested by local jurisdictions.

2.F.2 PROCESS OF CMP ROADWAY SYSTEM DEVELOPMENT

The CMP roadway system in San Bernardino County was developed in the following manner:

- The existing classifications of roadways were reviewed. This included a functional classification conducted by FHWA in the early 1980s, the System of Regional Significance defined in the 1989 Regional Mobility Plan, and a sample of classifications in local jurisdiction general plans.

- An initial "working network" was defined by the CMA staff. The initial roadway system included the roadways defined "principal arterial" by FHWA and any additional roadways also defined by the

System of Regional Significance. This served as the basis for preliminary review and recommendations by local jurisdictions and for the collection and analysis of traffic data.

- Meetings and discussions were held with local jurisdictions to review and refine the system. Both deletions and additions to the "working system" were made as a result of those reviews.

- Level of service analyses were conducted on the "working system." This provided additional perspective on the magnitude of congestion problems and brought into focus some of the implications of having a less extensive or more extensive roadway system.

- The roadway system was refined further on the level of service analysis results to reflect local staff input.

- The system was then reviewed and approved by local elected officials.

- Any new State highway will be included in the CMP system. Any new roadway designated as a principal arterial by local jurisdictions, and approved by the CMA Board, will also be included in the CMP system.

2.F.3 THE CMP SYSTEM FOR SAN BERNARDINO COUNTY

Figures 2-1, 2-2, and 2-3 show the CMP system countywide, within the Valley Region, and in the Victor Valley Region, respectively. The mileage characteristics of the roadways are shown in Figure 2-4.

Much of the CMP system mileage is in rural areas where the need for monitoring and the potential for system capacity deficiencies are reduced.

The CMP uses the term "CMP intersections" to refer to the intersection of two CMP roadways. "Key intersections" include all CMP intersections plus others identified by local jurisdictions as being important to maintaining mobility on the CMP system. For the CMP, intersections operating at level of service D or lower will normally be considered key intersections, in addition to the intersections of two CMP roadways. A listing of key intersections is presented in Appendix A. There are approximately 370 key intersections on the CMP system. The term "CMP segment" is defined as the roadway segment between two CMP intersections or, for limited access highways, the segment between two interchanges. A CMP segment will comprise a unit of measurement for those procedures not involving intersections.

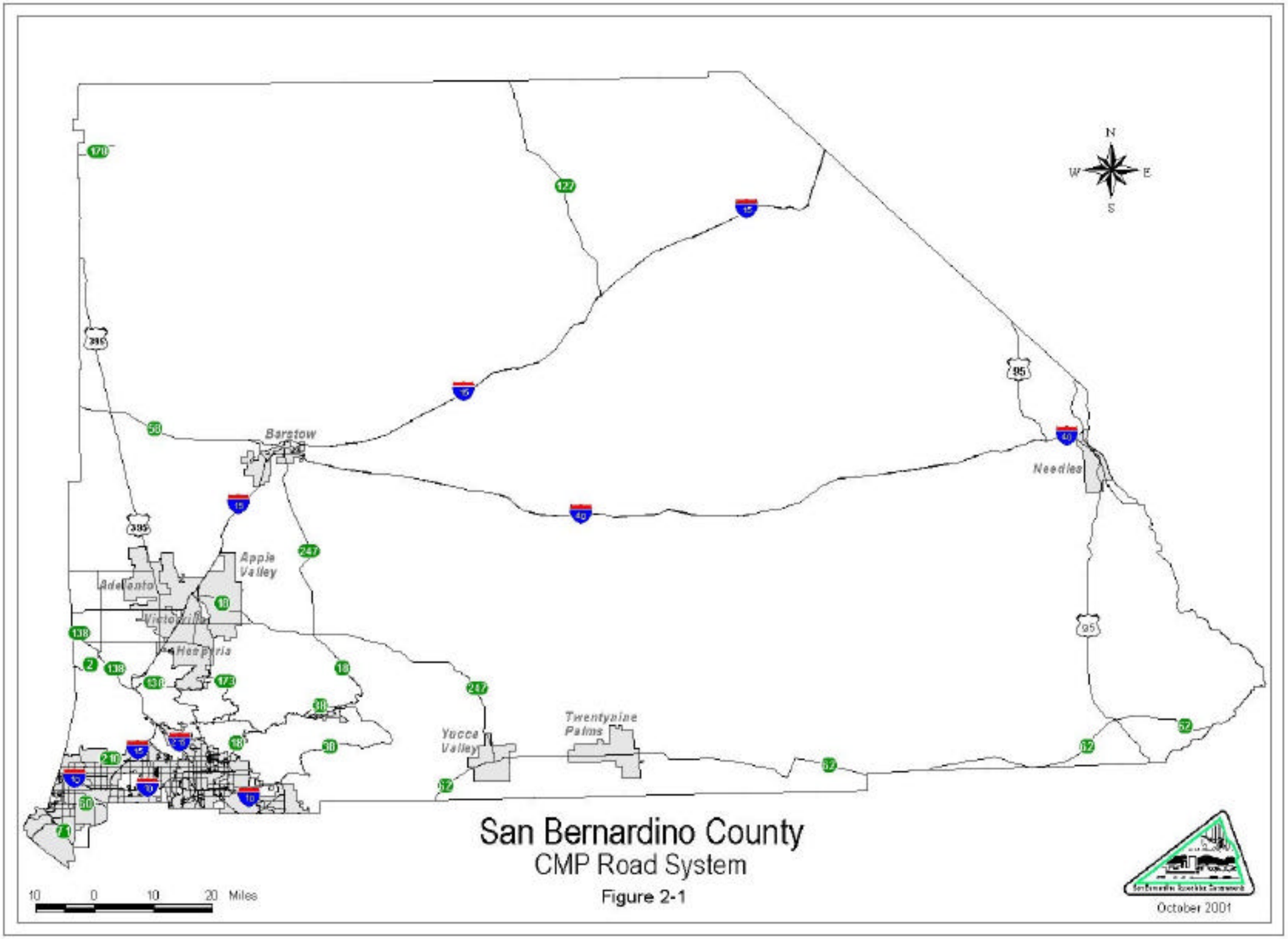
2.G CMP LEVEL OF SERVICE STANDARDS

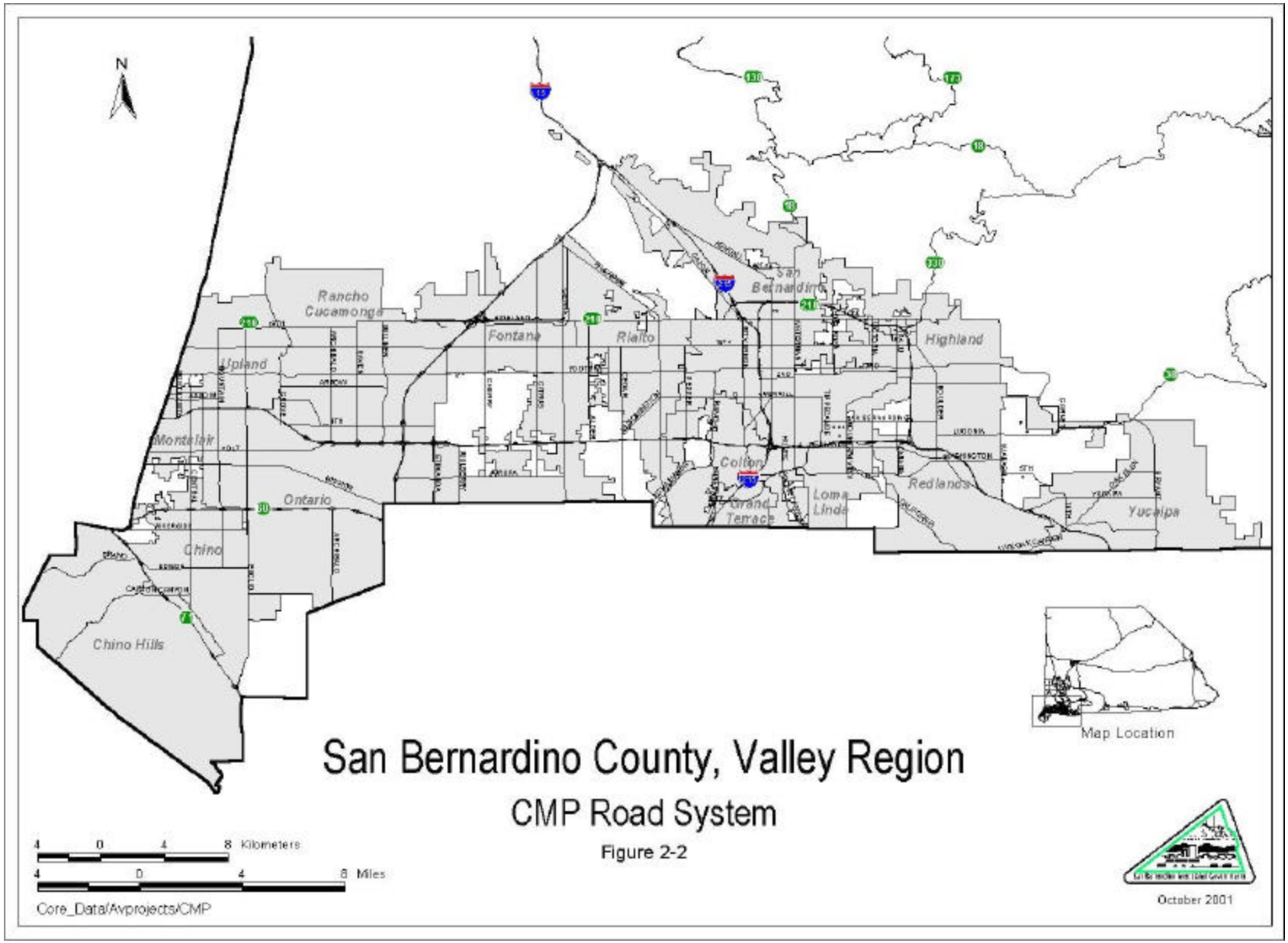
The CMP level of service standards apply to AM and PM weekday peak-hours, except in recreational areas such as Big Bear Lake, where average traffic peaks occurring on weekends will be used. For the CMP roadway system, the level of service standard shall be E for all segments and intersections except those designated level of service F, as listed in Table 2-1. Table 2-1 also shows portions of the CMP system determined to be deficient by the 1993 or 1995 CMP monitoring programs. Each deficient portion of the CMP system identified in Table 2-1 must be addressed through the deficiency process stipulated in Chapter 8 of this document.

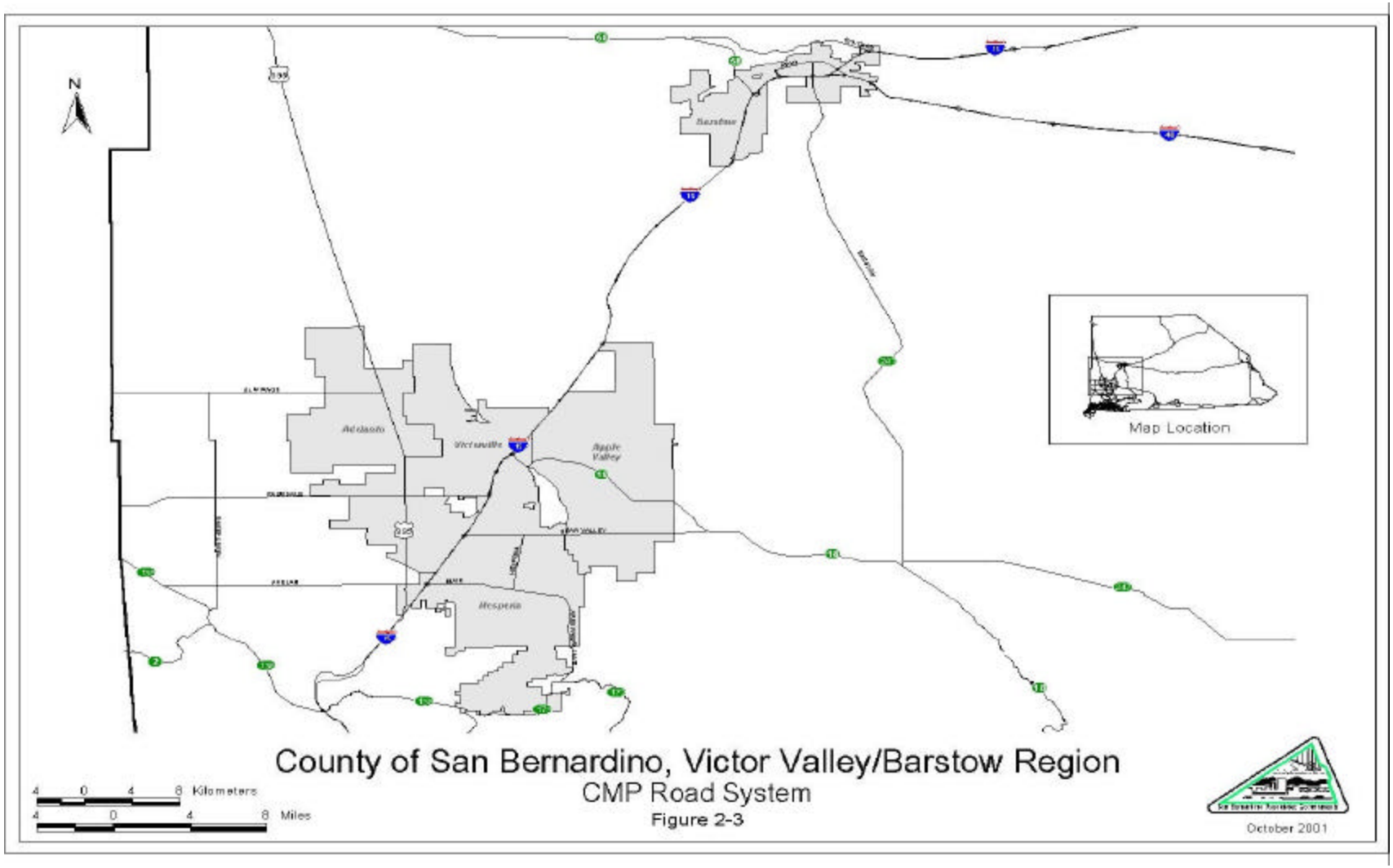
Intersections and segments designated level of service F were computed to be F for either the AM or PM weekday peak-hour.

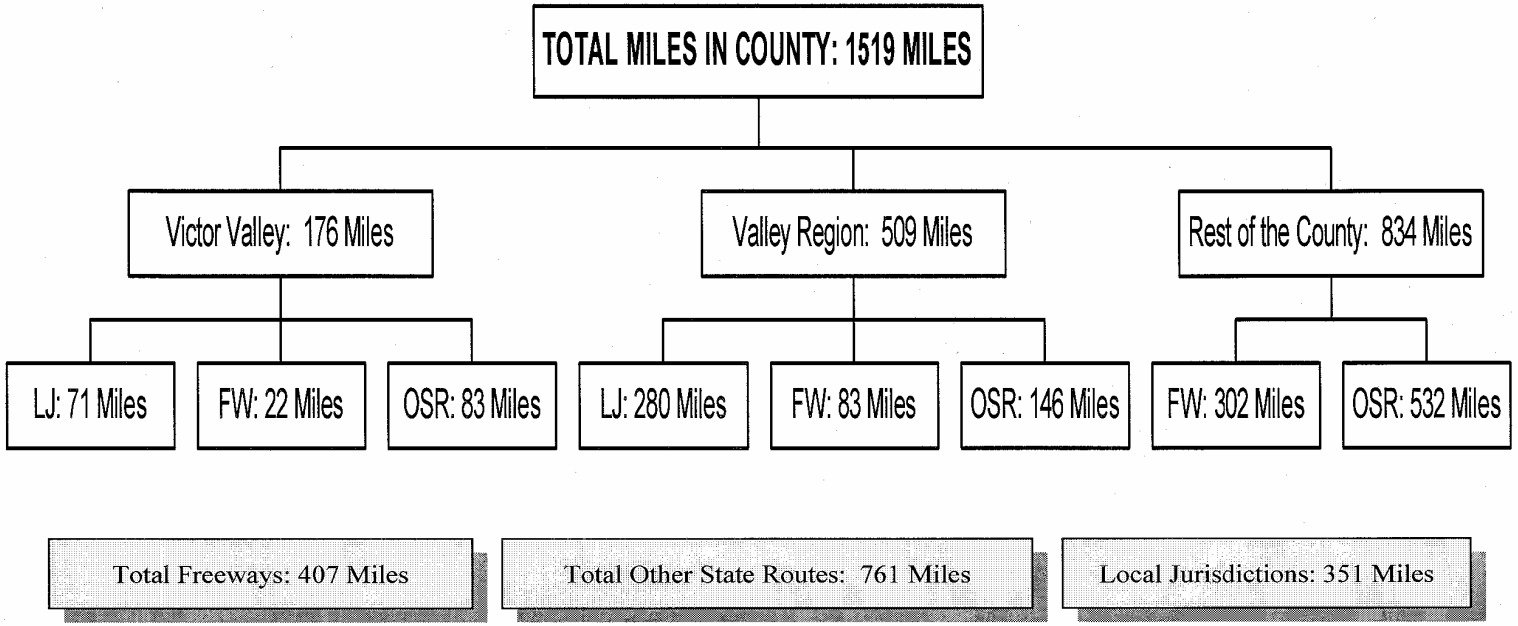
Other provisions of the CMP level of service standards are:

- Any facility with a LOS F standard in 1992 will be defined to have exceeded its LOS standard if the numerical value of level of service deteriorates by more than 10 percent (see Table 2-1). This provision is included to not permit dismissal of a serious level of service problem just because it is at the lowest letter grade in level of service. A table of current level of service values for intersections and segments with LOS F is presented in Appendix A.


N
W
E
S
Barstow
Needles
Apple Valley
Adelanto
Victorville
Hesperia
Yucca Valley
Twentynine Palms
San Bernardino County
CMP Road System
Figure 2-1
10 0 10 20 Miles
October 2001


N
Rancho Cucamonga
Fontana
Rialto
San Bernardino
Highland
Upland
Montclair
Ontario
Chino
Chino Hills
Colton
Loma Linda
Redlands
Grand Terrace
Yucaipa
Map Location
San Bernardino County, Valley Region
CMP Road System
Figure 2-2
4 0 4 8 Kilometers
4 0 4 8 Miles
Core_Data/Avprojects/CMP
October 2001


N
Barstow
Adelanto
Victorville
Apple Valley
Hesperia
Map Location
4 0 4 8 Kilometers
4 0 4 8 Miles
County of San Bernardino, Victor Valley/Barstow Region
CMP Road System
Figure 2-3
October 2001



Mileage Characteristics of the San Bernardino County CMP Network
Figure 2-4

Table 2-1

The following is a list of intersections which have been determined to be at LOS F in 1992 based on the average stopped delay per vehicle, or on a v/c ratio for the critical movements equal to or greater than 1.00:

	Local Jurisdiction	Average Stopped Delay/Vehicle	Critical v/c = 1.00
Anderson & Barton	Loma Linda		X
California & Redlands	Loma Linda-Rdlnds-SBdno Co.	X	
Mountain View & I-10 (EB)	Loma Linda		X
Grove & Holt	Ontario	X	X
Mountain & Holt	Ontario	X	X
Mountain & Mission	Ontario		X
Euclid & Holt	Ontario		X
Archibald & Foothill	Rancho Cucamonga	X	X
Carnelian & Baseline	Rancho Cucamonga	X	X
Vineyard & Foothill	Rancho Cucamonga	X	X
Grove & Foothill	Rancho Cucamonga-Upland		X
Alabama & Redlands	Redlands		X
Waterman & Hospitality	San Bernardino	X	X
Euclid & Arrow Hwy (10^{th})	Upland		X
Central & Foothill	Upland	X	X
Euclid & 19^{th}	Upland	X	X
Euclid & 16^{th}	Upland	X	X
Euclid & Foothill	Upland	X	X
Mountain & Foothill	Upland	X	X

Table 2-1
(continued)

1992 Segments Designated LOS F:

Freeways

- I-10 Westbound, Milliken Avenue to Central Avenue
- I-10 Westbound, Waterman Avenue to EB Rt-30
- I-10 Eastbound, Central Avenue to Milliken Avenue
- I-10 Eastbound, NB Rt-15 to SB Rt-15
- I-10 Eastbound, SB Waterman to California Street
- SR-60 Westbound, Milliken Avenue to Central Avenue
- SR-60 Eastbound, Central Avenue to Milliken Avenue
- I-215 Northbound, Inland Center to Route 30/Highland Avenue

Valley East/West Arterial Segments

- Foothill between Mountain and Archibald

Valley North/South Arterial Segments

- Citrus between Slover and Valley
- Cedar between Slover and Valley
- Mt. View between Barton and Redlands
- Mountain Ave. between Mission and Holt

Victor Valley Arterial Segments

- Bear Valley Rd. between Amargosa and Mariposa
- Bear Valley Rd. between Hesperia and Peach
- SR-18 between I-15 (North) and Stoddard Wells Rd.

2.H CMP LEVEL OF SERVICE ANALYSIS PROCEDURES

The procedures in the 2000 Highway Capacity Manual adopted by the Transportation Research Board serve as the level of service calculation procedures for the San Bernardino County CMP. Provisions are made, however, for more advanced analysis techniques to be adopted in the future, such as traffic signal timing programs for arterials, and freeway simulation models for limited access facilities. The use of these advanced simulation techniques will be at the discretion of each local agency.

The discussion below provides an overview of the procedures and their application in San Bernardino County. Appendix A provides background information on the procedures and their application to the CMP. Chapter 7 describes the data collection and monitoring procedures to be applied in maintaining a record of existing levels of service and reporting them in the annual CMP. In some cases, the transition to more advanced techniques is provided for in future CMP years, at the option of local agencies. With the exception of Big Bear Valley, all analyses for the annual level of service determination are to be conducted for the AM and PM weekday peak-hours, at a minimum. For Big Bear Valley, analyses shall be conducted for weekend recreation peak-hours, at a minimum.

- **Signalized Intersections**. Use the operations method in Chapter 16 of the 2000 Highway Capacity Manual for the AM and PM peak-hours to establish the LOS for all "key" intersections. The definition of key intersection is provided in the glossary. The definition of LOS F used for the CMP is average stopped delay per vehicle greater than 80 seconds or a volume/capacity ratio equal to or greater than 1.0 for the critical movements. Standard values for saturation flow rate, signal progression, and related factors are provided in Appendix C along with the guidelines for Traffic Impact Analysis Reports. Actual measured values for intersection parameters should be used whenever possible. Alternatively, jurisdictions may conduct a direct measurement of vehicle delay, as described in Part III Chapter 16 of the 2000 HCM.

- **Urban and Suburban Arterial Segments**. This analysis is conducted for a CMP link within an urban area. The definition of a CMP segment is provided above in this chapter and in the glossary. The analyses are to be conducted in the peak direction only for the AM and PM peak-hours. Two alternative methods are provided for urban and suburban arterial level of service, both based on Chapter 15 of the 2000 HCM. Either method may be used, at the option of the local jurisdiction or Caltrans. The first method is direct measurement of speed through moving car travel time runs. This method may be particularly important for CMP segments with levels of service close to the established standard. A minimum of four travel time runs distributed through the peak-hour is needed. The other method is the calculation of level of service from traffic volume, geometric, and signalization data, as described in Chapter 15 of the HCM. However, because it may be impractical to provide traffic counts for all signalized intersections on each CMP segment (as would be required for full implementation of Chapter 15 procedures), provision is made for a simplification of the procedure. The simplification is based on a procedure developed for use by the Florida Department of Transportation (FDOT, 1988). Using the procedures described in

Chapter 15 of the 2000 HCM, the FDOT procedure presents threshold hourly volumes for estimating the peak hour-peak direction level of service as a function of roadway type, urban area population, and the number of traffic signals per mile. The procedure also provides the generalized assumptions used to establish the threshold volumes. The details of these procedures are provided in Appendix A. This procedure should be considered as a screening method, and travel time runs are recommended for CMP segments within one LOS of the standard.

- **Freeways.** The 2000 HCM procedure for basic freeway segments is to be used for LOS analysis of freeways. The procedures must use the updated per lane capacity values (2300 vehicles per lane per hour) approved by the Transportation Research Board . These new values are based on the updated speed/flow curves and capacity information contained in the new materials for rural multilane highways. For the long-term, the network analysis tool FREQ may be considered for LOS analysis on the freeway network. This will ultimately provide the most comprehensive analysis tool available for the evaluation of traffic growth, roadway improvements, and land development, while maintaining an up-to-date assessment of LOS conditions.
- **Rural Multilane Highways**. Use the updated Chapter 21 materials from the 2000 HCM. There exists a limited number of miles of this roadway type in the CMP roadway system and, as urbanization of the region continues, these miles will probably become fewer.
- **Rural Two-Lane Highways**. The procedure for the LOS evaluation for rural two-lane highways is the 2000 HCM Chapter 20 method. Default values for directional distribution and percent no-passing zones may be used, but should be estimated for specific areas.
- **Roadways with Heavy Recreational Traffic**. Some roadways on the CMP system, particularly those in the mountain region, do not experience their highest traffic peaks during typical AM and PM weekday commuting periods. These roadways tend to carry heavy recreational traffic, which peaks during the weekends. For roadways in the mountain region, the basis for level of service analysis will be the peak-hour for a typical high season weekend. For purposes of the CMP, this is defined as a non-holiday weekend peak in February or March.

2.I SUMMARY OF AGENCY RESPONSIBILITIES

CMA Responsibilities

- Maintain and update the CMP roadway system maps.
- Approve additions to the CMP roadway system based on local recommendations.
- Maintain a functional definition to lend guidance to the addition of new principal arterials on the CMP roadway system.
- Provide supporting data to local jurisdictions to allow for the most effective application of the LOS procedures.
- Provide a description of the adopted capacity analysis procedures, update the procedures as needed through the

CMPTAC, and distribute information to local jurisdictions and Caltrans.

Local Jurisdiction Responsibilities

- Provide recommendations to the CMA on CMP roadway system additions.
- Incorporate adopted LOS procedures into analyses conducted for the CMP.

Caltrans Responsibilities

- Incorporate adopted LOS procedures into analyses conducted for the CMP.
- Make data for LOS analysis on State highways available to local jurisdictions and the CMA.

Air District Responsibilities

- Provide input on the air quality implications of decisions on level of service standards and the extent of the CMP roadway system.

3. PERFORMANCE ELEMENT

3.A BACKGROUND

Following passage of AB 1963 in 1994, the CMP is required to include a Performance Element, but no longer contains an element which focuses solely on transit. The principal reason for replacing the transit element with the performance element is that the separation of roadway issues from transit in past CMP's failed to provide an objective basis on which to select between modal alternatives to address various transportation problems, nor did past CMP's explicitly address goods movement. The ability to objectively address these issues is needed to ensure consistency with the Regional Transportation Plan, and because the CMP is the program through which California has chosen to meet federal Congestion Management System Requirements.

The objective of the performance element is to provide a basis on which to objectively assess the relative merits and select among available modal alternatives or other strategies to maintain mobility for people and goods in a period of continuing growth, fiscal constraints, and environmental concerns. The performance measures chosen for use in selecting and prioritizing among alternative transportation strategies should be those that best measure progress toward achieving the transportation objectives set forth in the Comprehensive Transportation Plan (CTP) for San Bernardino County and the Regional Transportation Plan.

Measures of multimodal mobility for people and goods can be used in several CMP elements: 1) in selecting among alternative mitigation strategies in the land use/transportation analysis program; 2) in defining the effectiveness of action programs to be implemented through deficiency plans; and 3) in developing the capital improvement program. Statute also requires continuing consideration of the transit measures (formerly called standards) from past CMP's, as well as measures of roadway system performance.

This chapter presents the legislative requirements; establishes objectives, policies, and actions; provides an overview of performance measures available for use to meet CMP requirements, and presents the measures and goals for transit routing, frequency, and coordination.

3.A.1 LEGAL REQUIREMENTS

California Government Code Section 65089 (b) states the requirements for inclusion of a Performance Element in the Congestion Management Program:

> (2) A performance element that includes performance measures to evaluate current and future multimodal system performance for the movement of people and goods. At a minimum, these performance measures shall incorporate highway and roadway system performance, and measures established for the frequency and routing of public transit, and for the coordination of transit service provided by separate operators. These performance measures shall support mobility, air quality, land use, and economic objectives, and shall be used in the development of the capital improvement program required pursuant to paragraph (5), deficiency plans required pursuant to Section 65089.4, and the land use analysis program required pursuant to paragraph (4).

3.A.2 BENEFITS AND IMPLICATIONS

Performance measures have been developed by the CMA as part of the CTP process, as well as by the Southern California Association of Governments for the 2001Regional Transportation Plan. A matrix which relates the CTP and Regional Transportation Plan performance measures to the goals and objectives of the CTP is shown in Table 3-1. A subset of these, focusing principally on multimodal mobility and goods movement, will be recommended for use in CMP applications.

The principal benefits of augmenting performance measures from past CMP's (traffic level of service and transit standards) with the measures identified in this chapter are:

- An enhanced ability to objectively evaluate and select among multimodal alternatives to address transportation system deficiencies,
- An improved basis for assessing the relative benefits of alternative investments on goods movement,
- Consideration of cost-effectiveness in the project selection and prioritization process, and
- Consideration of the mobile source emission reduction potential of alternative transportation investments and policies.

Measurement of traffic level of service (LOS) remains a significant component of the CMP. LOS for all CMP applications shall be measured in accordance with the most recent version (2000) of the Highway Capacity Manual (HCM), or by other methodologies found by the CMA to be consistent with 2000 HCM methods. Such findings are required to be made prior to the use of alternative methods to meet CMP requirements. Monitoring and LOS calculation procedures are discussed in more detail in Chapter 2 and Chapter 6.

Transit objectives for frequency, routing, and coordination in San Bernardino County have been developed in conjunction with the Transit Operating and Capital Plans, the Regional Transportation Plan, Air District Plans where appropriate, and the other CMP elements. The primary benefits of the transit objectives are:

- Provide additional direction for the continued development of transit services both geographically and over time, with emphasis on the peak period.
- Establish flexible criteria for the development of transit services in specific corridors and to employers and activity centers.
- Provide more specific information for transit considerations in local jurisdiction land use decisions, employer location decisions, and employee trip reduction programs.
- Provide potential air quality improvements through reductions in vehicle travel.

DRAFT

TABLE 3-1
COMPARISON OF PERFORMANCE MEASURES

GOAL	OBJECTIVE	CTP PERFORMANCE MEASURE	SCAG PERFORMANCE MEASURES	COMMENTS
#1: System Operations and Maintenance	#1. Maintain Accident Rates	Number of fatalities or injuries per vehicle miles traveled (VMT)	Reliability (probability of arriving at a destination) Safety (accident per person mile)	• Difficult to measure across modes (highway and transit) • Cannot forecast
		Percent or absolute amount of transportation funds allocated to operations and maintenance	Not applicable	• May not correlate directly to system safety
	#2: Rail/On-Road Vehicle Separations	Delay reduction or travel time savings at rail crossings	Not applicable	Difficult to evaluate on a systemwide level
	#3: Pavement/Roadbed Quality	Maintenance and operating cost per persons mile traveled (PMT)	Not applicable	May not correlate directly with pavement quality
		Measure of pavement quality	Not applicable	Cannot measure
		Measure of roadbed condition	Not applicable	Cannot measure
	#4: System Life-Cycle Cost	Total cost to expand and maintain system per PMT or person hours saved	Cost-effectiveness (service provider and societal cost per hour saved)	• Difficult to place a value on societal costs and benefits • Can only be applied to capital improvements, not maintenance projects
		Total cost to expand and maintain system per person trip (PT)	Cost-effectiveness	Same as above
#2: Timely Access to Essential Destinations	#1: Average Person Trip Travel Time	Average Person Trip Travel Time by Trip Purpose	Mobility (average person travel time adjusted for non-motorized and telecommuting)	• Difficult to estimate travel time for non-modeled modes (walking, biking)

GOAL	OBJECTIVE	CTP PERFORMANCE MEASURE	SCAG PERFORMANCE MEASURES	COMMENTS
		Average Person Trip Travel Time within ___Distance of Essential Destinations	Accessibility (percent of trips with travel times under a specified time or distance)	Same as above
		Percentage of persons with access to identified Essential Destinations within ___travel time	Accessibility	• Requires identification of activity centers • Difficult to measure for non-modeled areas • Difficult to include non-modeled modes
	#2: Improved Performance for Goods Movement Between Destinations	Average system travel speed	Not Applicable	• Cannot be measured on a systemwide level for non-modeled areas • Modeled speeds may not be "accurate"
		Average travel speed between origins and destinations critical to goods movement	Not Applicable	Same as above
		Volume to capacity ratio for goods movement by corridor	Not Applicable	Same as above
	#3: Improved Performance for Goods Movement through the County	Average system travel speed on freeways	Not Applicable	Same as above
		Average system travel speed on freeways between identified cordon stations	Not Applicable	Same as above
	#4: Maintain Peak Efficiency and Ease of Use	User-Satisfaction	Consumer Satisfaction (percent of satisfied customers)	• Difficult to assess for future systems
		Percentage of Person Miles Traveled occurring under Congested Conditions		Reduction in PMT or VMT (by link) occurring under congested conditions

GOAL	OBJECTIVE	CTP PERFORMANCE MEASURE	SCAG PERFORMANCE MEASURES	COMMENTS
#3: Fair and Equitable Access	#1: Promote low-cost transportation alternatives	Percentage of People with access to low user-cost alternatives within ___ travel time	Equity (to be determined)	• Difficult to define "access" and "low cost travel alternatives"
	#2: Provide Diversity of Jobs and Housing Opportunities	Number of Jobs and Housing within ____Travel Time of Activity Centers Served by Model Options	Not Applicable	• Cannot measure
	#3: Promote Transportation - Friendly Development	VMT reduced per capita	Not Applicable	• System effects of "transportation friendly development" not clearly understood (i.e., is VMT reduction a good measure?)
#4: Improve Economic Vitality, Public Health, and the Environment	#1: Increase Average Travel Speeds of Local Goods Movement Routes	Average system travel speeds for primary and secondary routes	Not Applicable	• Difficult to measure on a system-wide level for non-modeled areas
	#2: Reduce Transfer Delay at Intermodal Stations	Average travel time in and out of intermodal transfer stations	Not Applicable	• Applicable to project-level only
	#3: Maintain Consistency with SIP Mobile Source Emissions Budget	Tons of Emissions Generated by On-Road Mobile Sources operating within the County	Environment (tons of emissions)	• Required by law
		Average Vehicle Occupancy	Not applicable	• Difficult to forecast without mode split model
		Average Vehicle Ridership	Not applicable	Same as above
	#4: Reduce travel costs	Deleted; difficult to measure across modes		

GOAL	OBJECTIVE	CTP PERFORMANCE MEASURE	SCAG PERFORMANCE MEASURES	COMMENTS
	#5: Reduce rate of consumption of non-renewable energy sources	Gallons of gasoline consumed	Environment (gallons of gasoline)	• Cannot measure for non-modeled areas
#5: Facilitate use of Viable Transportation Opportunities	#1: Coordinate schedules	Average wait/transfer times	Reliability	• Cannot forecast operational characteristics of the system
	#2: Make information available	Level of investment in information systems	Consumer Satisfaction	• Difficult to measure

The transit-specific measures may be used in several contexts. Proposed mitigations developed in the land use/transportation analysis program may rely on transit service. In addition, a deficiency plan may require increased transit services or may encourage increased transit usage. Although the multimodal performance measures identified in this chapter can accomplish these goals, measures of transit frequency, routing, and coordination will continue to provide information needed to support these decisions. The feasibility of the increased services will need to be evaluated in light of the multimodal and transit specific measures, and financial implications of the needed increases in transit service.

The Congestion Management Agency (CMA) is required to monitor the implementation of the CMP by the County and the cities, including the frequency, routing, and coordination of transit service. Transit systems are also legally obligated to maintain fare recovery ratio thresholds and cost per hour growth rates. Transit plans and objectives must continue to recognize these requirements.

3.A.3 OBJECTIVES, POLICIES, AND ACTIONS

The CMP, as an implementation program for the Regional Transportation Plan and the CTP, as well as the program through which California has chosen to meet federal Congestion Management System Requirements, emphasizes maintenance of multimodal mobility for people and goods in ways that meet the safety, economic, environmental, and social needs of the citizens of San Bernardino County.

3.A.3.1 Multimodal Performance Measure Objectives, Policies, and Actions

Objective 3.1 Provide those who live and work in San Bernardino County with timely access to essential destinations.

Policy 3.1.1 - Maintain and apply performance indicators to measure the overall multimodal system performance in travel time to essential destinations.

Action Through the CTP and regional planning process, identify, maintain, and apply performance indicators which measure travel time for people, evaluate the ability of these indicators to measure travel time improvements across all modes resulting from alternative transportation strategies, and use appropriate measures in the CMP.

RESPONSIBILITY: The CMA, the regional agency, transit agencies, Caltrans, and local jurisdictions.

Policy 3.1.2 - Use selected performance indicators to evaluate the effectiveness of plan or program alternatives in achieving the performance goals of the CTP and CMP for San Bernardino County.

Action Incorporate use of selected performance indicators into the CMP Land Use/Transportation Analysis Program, the deficiency plan development process, and the prioritization of projects for the Capital Improvement Program, as appropriate.

RESPONSIBILITY: The CMA, in cooperation with Caltrans, transit agencies and local jurisdictions.

Objective 3.2 Provide for efficient and timely goods movement, as well as mobility for people, within and through San Bernardino County.

Policy 3.2.1 - Use indicators which measure the ability of the transportation system to provide for timely and efficient goods movement.

Action In concert with measures developed through the CTP and RTP processes, use performance indicators which measure the efficiency of goods movement within and through San Bernardino County, evaluate the ability of these indicators to measure travel time improvements across freight transport modes.

RESPONSIBILITY: The CMA, in cooperation with Caltrans, local jurisdictions, and the regional agency.

Policy 3.2.2 - Use selected performance indicators to evaluate the ability of alternative transportation improvements, strategies, and programs to achieve the performance goals and objectives of the CTP and CMP for San Bernardino County.

Action Consider goods movement indicators in the CMP Land Use/Transportation Analysis Program, the deficiency plan development process, and the prioritization of projects for the Capital Improvement Program, as appropriate.

RESPONSIBILITY: The CMA, in cooperation with Caltrans, local jurisdictions, and the regional agency.

Action Evaluate transportation improvements, programs, and plans using the selected indicators of goods movement performance in conjunction with indicators of people movement performance.

RESPONSIBILITY: The CMA, in cooperation with Caltrans, SCRRA, local jurisdictions, and the regional agency.

Objective 3.3 Consider relative cost- benefit and air quality benefits in selecting among transportation plan and improvement alternatives.

Action Incorporate use of cost -benefit analysis, including emission reduction benefits as appropriate, into the CMP Land Use/Transportation Analysis Program, the deficiency plan development process, and the prioritization of projects for the Capital Improvement Program.

RESPONSIBILITY: The CMA, in cooperation with Caltrans, SCRRA, local jurisdictions, and the regional agency.

3.A.3.2 Transit-Specific Goals in San Bernardino County

The CMP transit goals are consistent with local and regional transit goals though they are more specifically focused on transit as a component of a mobility and air quality improvement program. Local and regional goals also address mobility and air quality, but the current mobility emphasis in the small urban and rural communities of the County relates primarily to those who are totally dependent on transit for travel. The CMP transit goals, because they are oriented toward maintaining mobility and improving air quality, are focused on the peak-periods. For the larger urbanized area of the County (San Bernardino Valley) the focus of providing transit service has changed significantly since the last CMP update.

Omnitrans Mission Statement and Service Goals

The new mission statement of Omnitrans is to provide the San Bernardino Valley with comprehensive public mass transportation services which maximize customer use, comfort, safety, and satisfaction, while efficiently using financial and

other resources in an environmentally sensitive manner.

During the preparation of the Short Range Transit Plan for Fiscal Years 2002-2006, the Omnitrans Board adopted a goal to invest 65% of new resources toward productivity-oriented services and 35% toward coverage-oriented with the understanding that the SRTP would be financially constrained and that there would be no diminution of existing coverage-oriented service.

3.A.3.2 **Regional Transportation Plan Goals and Objectives**

The goals of the Regional Transportation Plan for Southern California are stated in Chapter 1 of the CMP. Many relate specifically to multimodality, cost-effectiveness, environmental quality, and goods movement, and are incorporated here by reference.

In San Bernardino County, transit ridership has been increasing significantly in recent years, although a recent market survey indicates that the majority of bust riders are transit dependent. The increasing ridership reflects the increasing population in the County, as well as improvements to existing transit services including the Metrolink commuter rail service serving many of the cities of the San Bernardino Valley portion of the County.

The 2001 RTP Update replaced the prior mode split goal with a new transit goal to maintain the 1997 regional per capita ridership of 34.9. With the regional forecast of a population growth of 22.6 million, a 40% increase in regional transit ridership would be necessary to meet the new per capita goal in 2025. The 1997 per capita ridership for Omnitrans was 6.5. By the end of Fiscal Year 2000-2001 Omnitrans had increased per capita ridership to 13.0, a 100% increase, while population grew by 2%.

The 2001 RTP includes a doubling of the Metrolink passenger carrying capacity through extensive double tracking on critical routes segments, switching and signal improvements, communication improvements, expansion of existing stations and additional equipment.

Community-based circulators or shuttles are also proposed in the 2001 RTP with a goal of potentially increasing transit ridership by 20 percent.

3.A.3.3 **CMP Transit Performance Objectives, Policies, and Actions**

Objective 3.4 Provide those who live, work, or recreate in San Bernardino County with transportation mobility options in addition to the private automobile.

Policy 3.4..1 - Design transit systems to accommodate a broad range of transportation needs, including services for those who are transit-dependent.

Action Monitor transit system performance relative to service frequency, routing, and coordination to maximize it's ability to meet the needs of local residents and employees.

RESPONSIBILITY: Transit agencies, with support from the CMA, local agencies, and the Air Districts.
SCHEDULE: Ongoing.

Policy 3.4.2 - Increase the level of transit service (routing and frequency) over time as needed to accommodate anticipated higher demand.

Action Identify long-term transit needs and funding issues through the CTP process and long-range transit plans.

RESPONSIBILITY: The CMA in cooperation with transit agencies, with support from local jurisdictions.
SCHEDULE: Ongoing.

Objective 3.5 Peak period mobility - Provide transit services to help maintain peak period mobility.

Policy 3.5.1 - Orient measures of transit system performance toward the peak commuting period.

Action Establish new transit service corridors within the time frames specified in the adopted transit plans and the CTP.

RESPONSIBILITY: Transit agencies, San Bernardino County, and the CMA.

SCHEDULE: According to time frames specified herein.

Action Coordinate transit schedules to effectively serve employer start and stop times and shift times.

RESPONSIBILITY: Transit agencies.

SCHEDULE: Ongoing.

Policy 3.5.2 - Coordinate bus operations with commuter rail, park-and-ride/express bus, and high occupancy vehicle facilities.

Action Include existing bus fleet operators in planning activities for commuter rail, HOV, and other facilities, including interbasin vanpooling.

RESPONSIBILITY: SANBAG, Caltrans, local jurisdictions, the Air Districts, and transit agencies.

SCHEDULE: Ongoing.

Objective 3.6 Provide transit services to reduce total vehicle emissions in San Bernardino County.

Policy 3.6.1 - Prioritize expansion of transit services in those corridors or areas that have the highest potential for emission reduction through increases in transit mode share.

Action Consider the air quality benefits of implementing new transit service in each corridor where new service is specified.

RESPONSIBILITY: SCAG, in conjunction with the air districts, transit agencies, and the CMA.

SCHEDULE: Coordinated with preparation of the regional transportation plan.

Policy 3.6.2 - Encourage and facilitate conversion of transit fleets in non-attainment areas to cleaner technologies.

Action Incorporate consideration of emission reduction benefits of fleet conversion to cleaner technologies into transit funding decisions.

RESPONSIBILITY: Transit agencies, the CMA, local jurisdictions, and Caltrans.

Objective 3.7 Operate the transit services efficiently to optimize the financial investment in the system.

Policy 3.7.1 - Support the provision of transit services through land use decisions and site planning that facilitates access to transit and encourages ridership.

Action Through the CTP, identify activity centers and corridors in which higher intensity transit-oriented development and higher intensity bus service, such as bus rapid transit (BRT), would be beneficial, and would be desired by local jurisdictions.

RESPONSIBILITY: The CMA in cooperation with local jurisdictions, the regional agency, and transit agencies.

SCHEDULE: Ongoing.

Action Provide guidance for transit-oriented development for use by local jurisdictions

working with developers in specified activity centers.

RESPONSIBILITY: The CMA, in cooperation with the regional agency, transit agencies, and local jurisdictions.

SCHEDULE: Ongoing (through the regional agency).

Action Through the regional and subregional planning processes, identify appropriate transit technologies and service characteristics to best meet the transit needs of future activity centers.

RESPONSIBILITY: The CMA, in cooperation with the regional agency, transit agencies, and local jurisdictions.

SCHEDULE: For incorporation into the CTP.

Policy 3.7.2 - Maintain required farebox recovery ratios and cost per hour requirements.

Action Maintain records on farebox recovery ratios and cost per hour requirements and annually report these indicators in the CMP.

RESPONSIBILITY: Transit agencies and CMA.

SCHEDULE: Annually.

Action Modify transit services and pricing policies to maintain farebox recovery ratios and cost per hour requirements.

RESPONSIBILITY: Transit agencies.

SCHEDULE: Ongoing.

3.B CMP PERFORMANCE MEASURES

Based on Section 3.A.3 this element, traffic LOS and measures of transit frequency, routing, and coordination are to be augmented by indicators capable of measuring progress toward the following objectives:

1) Timely access to essential destinations.

2) Efficient and timely goods movement.

3) Relative cost-effectiveness of plan and improvement alternatives.

4) Relative air quality benefits of plan and improvement alternatives.

Measures under consideration to address each of these objectives are cited below:

Timely Access -

1) Average Person Trip Travel Time

2) Mobility Index (average person trip travel time adjusted for transit, non-motorized, telecommuting)

3) Lost time (Actual travel time - normative travel time)

Goods Movement -

1) Average travel speed between origins and destinations critical to goods movement

2) Reliability (variance between actual and anticipated travel times)

Cost Effectiveness -

1) Total cost to expand, operate, and maintain system per:

a) person-miles traveled

b) person-hours saved

c) person-trip

Air Quality -

1) Tons of criteria pollutant emissions from on-road and other transportation sources.

2) Cost per ton of criteria pollutant emissions reduced.

The development and application of indicators of multimodal transportation system performance and goods movement are necessary and desirable components of regional and subregional transportation planning and programming, as well as being mandated by federal and state law. However, use of these measures is in its infancy, and although the measures cited above are eligible to be used as necessary to meet CMP requirements, they should not be considered an exhaustive list of the measures through which CMP requirements can be fulfilled. Further review and analysis of these and other indicators is occurring through State, regional, and countywide transportation planning efforts.

Specific measures to be used in addition to traffic LOS in the Land Use/Transportation Analysis Element and Deficiency Plan Element of the CMP are to be selected through the CMPTAC, subject to approval by the CMA Board of Directors. Use of the selected measures will be incorporated into the guidance for these elements to be contained in revisions to Appendices C and D, respectively. These revisions and subsequent updates, as needed, will be developed and incorporated into the CMP as they are completed, subject to CMA Board approval.

3.C EXISTING TRANSIT SERVICE

Communities in San Bernardino County with smaller populations are served by demand-responsive or limited fixed route systems, while larger, more densely populated cities are served by both a full fixed-route system and demand-responsive systems serving smaller subareas or special-needs populations such as elderly or persons with disabilities. Two transit operators, Greyhound and Orange Belt Stages, provide long-distance, intercity transportation. Major transfer points for Greyhound routes in San Bernardino County are San Bernardino, Victorville, and Barstow. Routes generally follow the major freeways. Orange Belt Stages operates one route between Fresno, California, and Las Vegas, Nevada, with an intermediate stop in

3.C.1 MOUNTAIN/DESERT REGION TRANSIT SERVICE

Since adoption of the first CMP in 1992, several changes in the types of transit service offered have occurred. Many of the demand responsive services have modified their operation by changing from a many-to-many dial-a-ride service to a deviating fixed route service.

Within the Victor Valley, the City of Adelanto now operates, under contract with the Victor Valley Transit Authority (VVTA), two deviated fixed routes; both providing service that connects Adelanto with Victorville. Traditional fixed route service is offered within the urbanized portion of the Victor Valley serving the Town of Apple Valley and the Cities of Hesperia and Victorville with eight routes. The VVTA also operates limited fixed route service (three runs per day) connecting Wrightwood, Phelan and Pinion Hills with Victorville and provides deviated service during the mid-day to the Tri-Communities area. Service to the Oro Grande and Silver Lakes area was also changed to route deviated service and will be increased to three round trips during Fiscal Year 2002. During Fiscal Year 2001-2002, VVTA is expected to implement commuter bus service connecting the Victor Valley with the Metrolink station in Rancho Cucamonga and Ontario Mills as well as downtown San Bernardino.

In the Barstow area, deviated transit service has been provided to the unincorporated areas surrounding the City of Barstow including Hinkley, Lenwood, Yermo, Daggett and Newberry Springs. Currently, three fixed routes are operated within the City of Barstow along with demand responsive service for the elderly and persons with disabilities.

In the Morongo Basin, ~~a~~ the Morongo Basin Transit Authority (MBTA) provides deviated fixed route service the Town of Yucca Valley and the City of Twentynine Palms, and the unincorporated communities of Landers and Flamingo Heights. Demand responsive service is also provided within the Town of Yucca Valley and City of Twentynine Plams as well as the unincorporated communities of Morongo Valley, Joshua Tree and Wonder Valley in the Morongo Basin. In addition, limited fixed route service is provided between Twentynine Palms and Yucca Valley and from the Morongo Basin to Palm Springs and Palm Desert in the Coachella Valley. Within the mountain communities, the Mountain Area Regional Transit Authority (MARTA) provides two fixed route services; one within the Big Bear Valley and one off-the-mountain fixed route that connect Crestline, Lake Arrowhead, and the Big Bear areas with the San Bernardino Valley. Demand responsive service is also provided by MARTA within Big Bear Valley and in Crestline, Lake Arrowhead and Running Springs

The Americans with Disabilities Act (ADA) requires that fixed route operators provide complimentary paratransit service for persons with substantial disabilities. The City of Barstow provides a dial-a-ride service for persons with disabilities and senior citizens. Within the Big Bear Valley a general public dial-a-ride service is provided. And, within the Victor Valley, an ADA complementary paratransit service and specialized subscription service is provided.

The City of Needles initiated deviated fixed route service in 1995, and continues to provide dial-a-ride service for seniors, and persons with disabilities.

Other demand responsive (dial-a-ride) systems operating in the Mountain/Desert Region include: Big River south of Needles and Trona.

While none of these systems are not running as frequently as thirty minutes, the common benchmark for commuter-oriented transit service, their schedules and routing have been developed with a focus on service work trips and well as non-work trips.

3.C.2 SAN BERNARDINO VALLEY REGION TRANSIT SERVICE

Southwestern San Bernardino County's more urbanized population is served by both demand-responsive and fixed-route service as provided by Omnitrans, the primary transit operator in this region of the County. Omnitrans thirty-three local and two express fixed route system requires the use of 145 peak-hour buses and is designed to serve most local and commuter-oriented needs of the general public, although a community-based demand-responsive systems are available for general public use in Chino Hills, Grand Terrace and Yucaipa. Omnitrans also provides ADA required complementary paratransit service for persons with substantial disabilities.

The Southern California Regional Rail Authority (SCRRA) initiated commuter rail service via the San Bernardino-Los Angeles Line between Montclair and Los Angeles in February 1993. Service on this line was extended to San Bernardino in May 1993. And the SCRRA initiated commuter rail service on the Riverside-Ontario-Los Angeles Line in June 1993. As of July 1, 2001, the San Bernardino-Los Angeles Line includes fifteen westbound and eastbound trips each weekday. Eight trips are operated during the morning peak period and seven trips are operated during the evening peak period. Saturday service was initiated in September 1995 and now consists of six trains in each direction. Sunday service was

initiated in June 2000 with four trains in each direction.

Service on the Riverside-Ontario-Los Angeles Line consists of five trips in morning peak period and five trips in the evening peak period and two off-peak trips, one in each direction .

Service from San Bernardino to Orange County (Irvine) was initiated in January 1996. There are three peak hour trips in the morning, four peak hour trips in the evening and one off-peak trip in each direction.
To the extent feasible, Omnitrans has revised bus schedules and routes to serve the new commuter rail stations. Commuter-oriented services are found mainly in the more densely populated urban areas in the southern part of the County and are provided by Omnitrans' fixed route service. Omnitrans currently provides service to approximately 90 percent of the major employers in the Valley.

Since January 1997 Omnitrans has continued a course initially recommended from a comprehensive operational analysis that included reducing fixed route coverage and increasing frequencies. The results of this effort has provided many routes operating on 15minute headways while others were increase to 30minute headways. The corridors with 30minute or better peak-period service are as follows:

- Yucaipa and Redlands to San Bernardino
- Montclair to Chino
- North/Central San Bernardino Corridor
- Fontana/Rancho Cucamonga /Montclair
- Montclair to Ontario
- North of I-10 from San Bernardino to Fontana
- Highland to San Bernardino

? I-10 Express – San Bernardino/Arrowhead Regional Medical Center/Ontario Mills/Montclair

? Pomona/Ontario/ Fontana

? Upland/Ontario/Chino

? Central Ontario/Southeast Ontario/Rancho Cucamonga

? Baseline Corridor – San Bernardino to Fontana

? Foothill Corridor – San Bernardino to Fontana and Fontana to Montclair

? Riverside Avenue – Rialto

? Highland to Redlands

3.D TRANSIT-SPECIFIC OBJECTIVES FOR SAN BERNARDINO COUNTY

3.D.1 ROUTING/FREQUENCY OBJECTIVES

The routing and frequency objectives in the San Bernardino Congestion Management Program are designed to do the following:

- Reinforce the existing transit service objectives related to providing for local mobility needs,
- Focus transit service enhancements on commuter markets and corridors,
- Reflect existing transit plans and projected resources,

- Provide direction for San Bernardino County to achieve the year 2001 Regional Transportation Plan goals, and

- Allow for operational flexibility in routing, scheduling, and the general provision of transit service to achieve the standards.

Maintenance or improvements in service as indicated by these objectives is also subject to the transit agencies achieving legally mandated minimum farebox recovery ratios and subsidy per hour requirements.

Because the transit-specific CMP objectives are designed to reflect current services and planned service improvements as well as longer-range mobility and air quality goals, they have been designed to reflect improved service over time. Objectives have been established for the following time frames:

- One to two years to reflect current service and improvements programmed for immediate implementation.

- By 2000 to reflect the transit goals for the CMP planning horizon (and to reflect Omnitrans' current five-year improvement program). Transit operators' five-year plans will identify improvements programmed for immediate future.

- By 2025 to reflect the transit service assumed for San Bernardino in the Regional Transportation Plan.

Table 3-2 presents the transit routing/coverage and frequency objectives. The objectives are organized as follows:

- Local service objectives related to service provided to meet local mobility needs,

- Corridor objectives for major commuter corridors, and

- Employer/Activity center objectives for the provision of service to major transit destinations.

The time frame for service frequency improvements reflects the current transit providers' five-year plans and the Regional Transportation Plan (RTP) goals. To achieve the RTP goals for San Bernardino County, it is projected that these corridors will need to have at least 15 minute and possibly 10 minute peak-period service, and in some cases even more frequent if demand warrants.

3.D.1.1 **Local Service**

The local service objectives are designed to allow each community the flexibility to meet local mobility needs in the manner most appropriate for each area. In some areas, particularly in the Mountain/Desert area, local mobility needs are best met with a general public dial-a-ride; or deviated fixed route services; for other areas a combination of fixed-route service and special purpose dial-a-ride service more effectively meets community needs. Objectives for local service reflect the need to provide service to a majority of the population as well as the CMP goal of having transit be a viable travel option to most major employment and activity centers.

3.D.1.2 **Corridor Service**

The CMP transit objectives identify existing transit corridors as well as new ones to be developed over the next several years. The purpose of identifying these corridors is to establish guidance for transit service improvements and to encourage future development within these transit corridors. Transit service is most effective in attracting choice riders where there is a density of trips to support frequent service. These transit corridor objectives are as follows:

- San Bernardino/Riverside to Irvine -- 60 minute peak period frequency. (Commuter rail to be implemented 1/96)

- San Bernardino/Ontario/Montclair to Los Angeles -- 40 minute peak period. (Commuter rail in place)

- San Bernardino to Fontana to Montclair -- 15-minute peak period, combined routes. (Service in place after restructuring)

- San Bernardino to Redlands -- approximately 30 minutes in the peak periods. (Service in place after restructuring)

- Ontario Airport to Rancho Cucamonga -- 30-minute peak period, 15-minute frequency as the longer-term objective.

- Montclair/Chino -- 30 minute peak period frequency with long-term objective of 15 minutes in the peak .

- Montclair/Ontario -- current service provides 30-minute frequency.

- North/Central San Bernardino Corridor -- maintain current 15 minute average frequency. (Service in place after restructuring)

- Redlands to Highland – maintain current 30-minute frequency.

- Victorville to San Bernardino/ Ontario -- develop transit service plan and implement demonstration service. VVTA to implement in Fiscal Year 2001-2002.

- Crestline/Lake Arrowhead to San Bernardino -- objective is 30 minute peak period frequency.

- Big Bear Lake to San Bernardino Valley -- consider non-highway alternative for travel between San Bernardino Valley and Big Bear Lake Area. No objectives established to date.

3.D.1.3 **Employer/Activity Centers**

Transit standards have been established for service to employers and major activity centers to reflect the need for service to major transit destinations. Systems in the Mountain/Desert region of the county provide service to major community service destinations, particularly medical facilities. Service improvements in this region have focused more on serving employment centers. Currently, OMNITRANS provides service within one-half mile of approximately 90 percent of the major employers (employers with over 100 employees) within its service area. The CMP transit objectives call for transit service to major employers to increase to 90 percent of major employers served within one-fourth mile by 2000.

While service is being planned to serve a greater number of major employers, it is important for future employment development to occur in existing transit corridors, or at least in areas easily served by transit. These transit objectives are not meant to imply that the transit providers have an obligation to provide service to every new employer, regardless of location. Rather, it is hoped that available transit services will be considered in the initial phases of project location and that once a site is selected, the project design will be developed to accommodate transit service (particularly through pedestrian friendly environments, the ability of transit to serve the "front door," and rider amenities such as transit shelters).

The transit objectives to major activity centers reflect the need to serve all major activity centers, such as government centers, major regional shopping centers, and major medical facilities. As rail service is developed in the county, the CMP

transit objectives call for feeder bus service to the rail stations.

3.D.2 TRANSIT COORDINATION OBJECTIVES

The CMP legislation requires that measures be maintained for the coordination of transit services. Table 3-2 presents the coordination objectives for the San Bernardino CMP. Currently, there is a policy among operators to cross service area boundaries when passenger demand warrants, and there are interagency service agreements for the provision of service beyond county boundaries. The CMP coordination objectives provide for the continuation of policies for coordination of service and schedules.

The existing SANBAG policy to honor transfers from other systems is incorporated into the CMP fare coordination objective. The fare coordination objective also includes participation in the regional transit pass program as it develops.

3.E FIVE-YEAR TRANSIT CAPITAL PROGRAM

The five-year transit capital program to support the CMP transit objectives is provided in Appendix E. Capital needs are summarized for commuter rail service, Omnitrans, and the Mountain/Desert Region.

Table 3-2 San Bernardino Congestion Management Plan

Coordination Standards

AREA	CURRENT	CMP STANDARD
Service	Informal policy to cross service area boundaries when passenger demand warrants Two interagency funding agreements for provision of service beyond county boundaries	Service planning to corridor areas just over service area boundary Schedules of county operators to be coordinated to allow transfer to other regional operators to extent feasible Operators which have common transfer points be required to share information on service/ schedule changes As rail service is developed, local services are scheduled to provide feeder service to stations
Fare	Interagency transfers governed by SANBAG 8/80 rules: 1) Public transit operators shall mutually issue and honor transfer tickets submitted as one base fare for continuation of a trip 2) fares collected for such interoperator transfer tickets shall be retained by the issuing operator and shall not be greater than the charge for intra-operator transfers 3) To the extent practical, the ability to transfer conveniently shall be built into the schedules and stops of interconnecting lines.	Use current SANBAG policy Participate in Regional Transit Pass Program as it develops

4. LAND USE/TRANSPORTATION ANALYSIS PROGRAM

4.A BACKGROUND

The Land Use/Transportation Analysis Program is one of three components of the CMP that address future problems or deficiencies on the transportation system. The other components, annual modeling of the CMP system and deficiency plans, are discussed in Chapters 7 and 8 of this document, respectively.

In addition, the CMA Board of Directors' policy provides that the countywide Comprehensive Transportation Plan (CTP) will define the actions, projects, or strategies to be implemented through areawide deficiency plans to maintain mobility for people and goods.

The detailed procedures for implementing this CMP element are specified in Appendix C. An addendum to Appendix C will be developed through the CMPTAC, subject to approval by the CMA Board of Directors, to specify an alternate, streamlined process to be followed only within areas covered by deficiency plans. The framework for the alternate process is discussed below.

4.A.1 LEGAL REQUIREMENTS

California Government Code Section 65089 (b)(4) states the requirements for analysis of the impacts of land use decisions on the regional transportation system as defined by the CMP:

> "The program shall contain . . . a program to analyze the impacts of land use decisions made by local jurisdictions on regional transportation systems, including an estimate of the costs associated with mitigating those impacts. This program shall measure, to the extent possible, the impact to the transportation system using the performance measures described in paragraph (2) (the performance measures element of the CMP). In no case shall the program include an estimate of the costs of mitigating the impacts of interregional travel. The program shall provide credit for local public and private contributions to improvements to regional transportation systems. However, in the case of toll road facilities, credit shall only be allowed for local public and private contributions which are unreimbursed from toll revenues or other state or federal sources. The agency shall calculate the amount of the credit to be provided. The program defined under this section may require implementation through the requirements and analysis of the California Environmental Quality Act, in order to avoid duplication."

In addition, Section 65089.3 (a) of the Government Code requires the Congestion Management Agency (CMA) to:

> "monitor the implementation of all elements of the congestion management program.

Government Code Section 65089.7 places limitations on projects required to be analyzed through the Land Use/Transportation Analysis Program:

"A proposed development specified in a development agreement entered into prior to July 10, 1989, shall not be subject to any action taken to comply with this chapter, except actions required to be taken with respect to travel demand element of a congestion management program pursuant to paragraph (3) of subdivision (b) of Section 65089."

> At least biennially, the agency shall determine if the county and cities are conforming to the congestion management program, including, but not limited to, all of the following:

> ...c) Adoption and implementation of a program to analyze the impacts of land use decisions, including the estimate of the costs associated with mitigating these impacts.
>
> (d) Adoption and implementation of a deficiency plan pursuant to Section 65089.4 when highway and roadway level of service standards are not maintained on portions of the designated system.

These sections of the Government Code obligate each jurisdiction to either maintain the level of service standard on the CMP road system by mitigating the impacts of that jurisdiction's land use decisions, or to prepare and implement a deficiency plan to either return the level of service to the CMP standard, or provide for systemwide transportation performance and air quality improvements (which may, at local discretion, not include returning the facility to the CMP LOS standard).

Each local jurisdiction has adopted and is implementing a Land Use/Transportation Analysis Program designed to be consistent with the guidelines provided in Appendix C of this document. Failure of a local jurisdiction to address an exceedance of the level of service standard on the CMP system, or failure to implement a consistent Land Use/Transportation Analysis Program, would result in the CMA finding the local jurisdiction not in compliance with the CMP. This finding would be transmitted to the state Controller's office, which would result in withholding, or ultimately, loss of the jurisdiction's share of the Proposition 111 increase in gas tax funds.

Upon approval of an areawide deficiency plan pursuant to Government Code Section 65089.4 and the Deficiency Plan element of the CMP (Chapter 8), the land use/transportation analyis program within the area encompassed by the deficiency plan will change. The focus of the land use/transportation analysis program as it applies to projects within such an area will depend on whether the land use change or project is consistent with the growth forecast used to develop the deficiency plan.

If the land use change or project is consistent with the growth projection, the role of the Traffic Impact Analysis is principally to provide for timely phasing of transportation projects or strategies already identified for that area by the CTP and incorporated into the deficiency plan. In this way, it provides a basis for the implementation schedule that must be included within the deficiency plan's action plan.

If the land use change or project is not consistent with the growth projections used to develop the CTP and the deficiency plan's action plan, modifications may ultimately be needed to both plans as well as the growth projection. This would occur through the biennial CTP, CMP, and deficiency plan update process, but the transportation mitigations originally identified by the CTP may also have to be augmented through the Traffic Impact Analysis Report process.

In either case, the prior identification of the long-range capital improvements called for in the CTP within the vicinity of the proposed change in land use, including both mitigating projects and other strategies, as well as the selection of the appropriate implementation and financing mechanisms, will reduce delays associated with compliance with this program. This approach will also allow dismissal of mitigations and related costs that are infeasible or undesirable. In either case, too, analysis localized in the immediate vicinity of the project will continue to be included in the TIA process to address local access and congestion issues of a scale too small to be covered in the CTP or areawide deficiency plan.

4.A.2 BENEFITS OF THE PROGRAM

The Land Use/Transportation Analysis Program benefits local jurisdictions in several ways:

- Provides a set of consistent guidelines for Traffic Impact Analysis (TIA) Reports, to provide local decision makers with comprehensive data on project impacts, needed mitigations, and mitigation costs, all designed to assist in making local land use decisions.

- Provides an opportunity to be informed of land use changes and to provide substantive response to potential impacts of these changes in nearby jurisdictions.
- Creates a process to address interjurisdictional impacts.

- Provides information on which to base a more equitable allocation of costs among projects, jurisdictions, and other funding sources to mitigate transportation impacts on the CMP system.

- Will provide the process to mitigate impacts on the CMP system by appropriately phasing implementation of the actions identified within areawide deficiency plans.

4.A.3 IMPLICATIONS OF CMP REVIEW

The authority to make land use decisions rests solely with local jurisdictions. The Land Use/Transportation Analysis Program can influence land use decisions by requiring full evaluation and disclosure of impacts to the regional transportation system, regardless of jurisdictional boundaries. Local jurisdictions are required to maintain the adopted level of service standards on the CMP system or prepare a deficiency plan, so it is essential that local jurisdictions consider the necessary actions and costs required to mitigate impacts resulting from local land use decisions. A local jurisdiction which fails to address deficiencies on the CMP System which are caused by exercise of its land use authority faces loss of the increment of local gas tax monies added by Proposition 111.

Once deficiency plans have been adopted in accordance with state law and CMA policy, the process can be streamlined so long as land use decisions are consistent with the growth assumptions, developed by SCAG in accordance with local input, on which the CTP and the deficiency plan are based. Impacts of projects that are inconsistent with the growth forecasts may not be appropriately addressed by the areawide deficiency plan, and would therefore require an analysis similar to that conducted under the guidelines that are applicable prior to deficiency plan adoption.

4.B OBJECTIVES, POLICIES, AND ACTIONS

Objective 4.1 Provide adequate mobility for people and goods by integrating consideration of land uses and the transportation system, and promoting transportation-friendly development patterns.

Policy 4.1.1 - Identify and quantify the direct and cumulative impacts of proposed land use decisions on the regional transportation system.

Action Implement the Land Use/Transportation Analysis Program through preparation of TIA Reports on projects which exceed the applicable thresholds, and certify that the analysis is consistent with the CMP guidelines.

RESPONSIBILITY: Local jurisdictions.

Action In areas where deficiency plans have been adopted, determine if

proposed land use changes are consistent with growth forecasts used in development of the deficiency plan. If the project is deemed consistent, use the TIA process to develop appropriate deficiency plan phasing. If the project is deemed inconsistent, use the TIA process to submit a revision to the growth forecast and develop appropriate mitigations beyond those identified in the deficiency plan.

RESPONSIBILITY: Local jurisdictions.

Action Where areawide deficiency plans have not yet been adopted, consider a range of alternatives to meet travel demand, including capacity increases, alternative modes, demand management, land use patterns and intensities, project design, and use criteria based on the CMP TIA Report guidelines and performance measures element of the CMP as a basis for evaluating and selecting the most appropriate strategies.

RESPONSIBILITY: Local jurisdictions.

Policy 4.1.2 - Assess long-term regional transportation needs based on planned land uses, and develop the CTP and areawide deficiency plans to meet those needs.

Action In cooperation with local jurisdictions, complete the development of the CTP and areawide deficiency plans to implement it.

RESPONSIBILITY: CMA to coordinate, local jurisdictions, transit providers, SCAG, and Caltrans to participate.

Policy 4.1.3 - Develop and implement a program which apportions fairly the responsibility for mitigation of deficiencies on the CMP system among local jurisdictions and State agencies.

Action Prepare areawide deficiency plans in accordance with the CTP, and use the TIA Report process as the phasing mechanism for it.

RESPONSIBILITY: Jurisdictions participating in areawide deficiency plan preparation.

Action Include interjurisdictional notification and opportunities for potentially impacted jurisdictions to provide responses to TIA Reports into the local land use decision and impact mitigation process.

RESPONSIBILITY: Jurisdictions responsible for TIA Report preparation.

Action In association with the CTP, develop a program to provide fair, consistent, areawide mitigation of impacts and funding of improvements on the regional transportation system needed to support economic development and local land use decisions.

RESPONSIBILITY: The CMA, local jurisdictions, the regional agency, transit providers, and air districts.

Objective 4.2 Anticipation of needs - Forecast deficiencies and avoid breakdowns of the regional transportation system through a comprehensive, systematic program.

Policy 4.2.1 - Forecast the regional transportation impacts of land use plans and projects, and identify needed improvements or mitigation

strategies and their costs through the CTP process.

Action Implement and maintain a countywide database of existing and future land use, or socioeconomic data on which to base CTP and deficiency plan updates, as well as land use consistency determinations for the Land Use/Transportation Analysis Program.

RESPONSIBILITY: SCAG and the CMA, with participation by local jurisdictions and air districts.

Action Conduct annual CMP model runs.

RESPONSIBILITY: SCAG.

Policy 4.2.2 - Implement the program locally, using consistent analytical procedures and methodologies, and consider interjurisdictional as well as local impacts and solutions based on strategies developed through the CTP.

Action Implement the CTP through areawide deficiency plans and the TIA Report process.

RESPONSIBILITY: Local jurisdictions.

Action Make data available from the CMP model runs for use with local traffic models, and maintain socio-economic data sets.

RESPONSIBILITY: SCAG and the CMA.

Action Assist in making traffic, transit and TDM data available to local agencies for purposes of preparing CMP TIA reports.

RESPONSIBILITY: The CMA, Caltrans, air districts, and transit agencies.

Action Require traffic monitoring programs for certain development projects to confirm follow-through of commitments made to the agencies impacted by that development, and establish guidelines for such monitoring programs as needed.

RESPONSIBILITY: Local jurisdictions, with assistance from the CMA upon local request.

Action Identify mitigation programs which can be implemented locally through the CTP, to address cumulative development impacts which may cause deficiencies on the CMP system. Such programs should reflect the resources and administrative mechanisms currently and potentially available to local jurisdictions.

RESPONSIBILITY: The CMA and local jurisdictions.

Objective 4.3 Equity - Apportion the cost of mitigating impacts on the transportation system equitably among all who contribute to the impacts.

Policy 4.3.1 - Identify the effect of specific land use changes on the transportation system, regardless of jurisdictional boundaries, and communicate the information to all affected jurisdictions.

Action Implement the Land Use/Transportation Analysis Program through preparation of CMP TIA Reports when a project or group of projects meet the threshold criteria specified in this chapter.

RESPONSIBILITY: Local jurisdictions.

Action Participate as needed in discussions on the potential interjurisdictional impacts of land use decisions, mitigation of potential deficiencies, and fair apportionment of responsibility for mitigation. The CMA and Caltrans may participate at the request of a lead agency or a potentially impacted jurisdiction.

RESPONSIBILITY: Local jurisdictions, the CMA, Caltrans, and air districts.

Action Maintain, refine, and as needed, use the conflict resolution process provided in Appendix F to develop administrative solutions to interjurisdictional disagree-ments.

RESPONSIBILITY: Local jurisdictions initiate, the CMA facilitates.

Policy 4.3.2 - Provide a process to monitor and forecast the cumulative, incremental impacts of all projects, and identify measures and costs to mitigate the incremental impacts.

Action Identify the cumulative transportation impacts of projects through the CTP planning process, and use the Land Use/Transportation Analysis Program as a mechanism to monitor growth and its impacts on the transportation system.

RESPONSIBILITY: The CMA to initiate, local jurisdictions to participate.

Policy 4.3.3 - Develop or create a mechanism to finance, and fairly apportion, the cost of funding the transportation improvements and strategies needed to maintain mobility for people and goods in growing areas.

Action Use the CTP process as a way to identify the set of preferred transportation improvements and programs needed to offset the cumulative impacts of growth on the regional transportation system, and to determine how they should be funded.

RESPONSIBILITY: The CMA to initiate, local agencies, Caltrans, SCAG, and air districts to participate.

Policy 4.3.4 - Provide credit to local jurisdictions and project applicants within the jurisdiction who provide improvements to the regional transportation system which exceed the level of improvement required to mitigate deficiencies caused by the jurisdiction's land use decisions.

Action Through the CMPTAC, develop a process to define conditions under which credit shall be provided, the form the credit shall take, and the amount of credit to be provided for provision of improvements to the regional transportation system which exceed those required to mitigate deficiencies caused by a jurisdiction's land use decisions.

RESPONSIBILITY: The CMA, with local jurisdiction input.

Objective 4.4 Improve coordination among jurisdictions to ensure consistent consideration, analysis and mitigation of interjurisdictional impacts

of development on the regional transportation system.

Policy 4.4.1 - Identify the transportation impacts of significant land use changes, regardless of jurisdictional location or political boundaries.

Action Prepare CMP TIA Reports when a project or group of projects meets the threshold criteria specified within this chapter.

Policy 4.4.2 - Provide a mechanism for consistent communication of impact analysis results, possible mitigations, and mitigation costs to potentially impacted jurisdictions, Caltrans, and the CMA.

Action As indicated in Policy 4.4.2, CMP TIA Reports shall be provided to the CMA and adjacent jurisdictions so that information exchange and communication can occur in concert with the permitting jurisdiction's project review schedule and prior to any approval or permit activity. Local jurisdictions which receive TIA Reports shall provide any comments within 15 working days from the date of receipt from the permitting jurisdiction. Should the comments received from adjacent jurisdictions, the CMA, Caltrans, or transit agencies recommend changes to the TIA Report, the permitting jurisdiction shall consider comments received and make changes deemed necessary by the permitting jurisdiction. Should the changes be such that the permitting jurisdiction chooses to recirculate the document, the commenting agencies will complete the review of the revised document no later than 10 working days from receipt. This process is intended to be consistent with any actions required under the local Land Use/Transportation Analysis Program.

RESPONSIBILITY: Local jurisdictions, the CMA, Caltrans, transit agencies.

Action Maintain the TIA Report guidelines and coordinate modification of the guidelines as needed. If interjurisdictional impacts of land use decisions, mitigation of potential deficiencies, and fair apportionment of responsibility for mitigation. The CMA and Caltrans may participate at the request of a lead agency or a potentially impacted jurisdiction.

RESPONSIBILITY: Local jurisdictions, the CMA, and Caltrans.

Action Participate as needed in discussions on the potential modification is needed, the modified versions of the guidelines are to be distributed to all local jurisdictions, transit agencies, and Caltrans. Any modifications to the guidelines are to be developed and recommended by the CMPTAC which consists of staff representatives of the CMA and local jurisdictions. Modifications must ultimately be approved by the CMA Board.

RESPONSIBILITY: The CMA in coordination with local jurisdictions.

Action Maintain a log and file of TIA Reports received, formal comments related to TIA Reports received from other jurisdictions, and dates of submission of comments to the lead agency.

RESPONSIBILITY: CMA.

Policy 4.4.3 - Ensure appropriate consideration of transportation control measures and mitigation of air quality impacts in the Land Use/Transportation Analysis Program.

Action Adopt, implement, and enforce transportation control measures for the attainment of state or federal ambient air quality standards to the extent they are required by the State Implementation Plan or air districts. Provide guidance to local jurisdictions in the inclusion of transportation control measures in development plans.

RESPONSIBILITY: Air districts.

Action Maintain the TIA Report guidelines and coordinate modification of the guidelines if needed to support mobile source air quality measures contained in air quality plans and the State Implementation Plan. If modification is needed, the modified versions of the guidelines are to be distributed to all local jurisdictions, transit agencies, and Caltrans. Any modifications to the guidelines are to be developed and recommended by the CMPTAC and approved by the CMA Board.

RESPONSIBILITY: The CMA in coordination with local jurisdictions and air districts.

Objective 4.5 Consistency - Provide a consistent, analytically sound approach to identification of impacts, evaluation of mitigations, and fair apportionment of responsibility to mitigate impacts on the CMP system.

Policy 4.5.1 - Require consistent application of the specified methodology for analyzing the impacts of land use decisions, evaluating mitigations, and estimating mitigation costs by all jurisdictions.

Action Develop the Land Use/Transportation Analysis guidelines to be adopted by local jurisdictions, determine conformance of adopted programs, and analyze TIA Reports for CMP procedural compliance.

RESPONSIBILITY: The CMA and local jurisdictions.

Action Implement the Land Use/Transportation Analysis Program and certify that analyses are consistent with the CMP guidelines.

RESPONSIBILITY: Local jurisdictions.

Policy 4.5.2 - Provide for consistency of procedures with the requirements of other regional programs and plans.

Action Assist the air districts to identify transportation control measures or other transportation strategies which will receive credit toward significant air quality improvements.

RESPONSIBILITY: CMA.

Action If needed, assist in defining the role of air quality analysis in TIA Reports.

RESPONSIBILITY: The CMA, air districts, and local jurisdictions.

Action Monitor the development of other regional plans and programs, and identify any necessary modifications to the Land Use/Transportation Analysis Program to maintain consistency.

RESPONSIBILITY: The CMA, with local jurisdiction input.

Objective 4.6 Opportunity - Identify opportunities to improve the performance of the multimodal transportation system concurrent with development, to minimize improvement costs and reliance on public financing.

Policy 4.6.1 - Develop and implement a notification process for identifying right-of-way acquisition, lane addition, and access control opportunities on the CMP roadway system, concurrent with development.

Action In federally designated urbanized areas, notify Caltrans and the CMA of any proposed traffic-generating projects (other than a single family residence) where any portion shares a property line in common with a State highway, or is on a roadway which intersects a State highway, and is within 500 feet of that intersection, including interchange ramps.

RESPONSIBILITY: Local jurisdictions.

4.B.1 APPROACH TO THE PROGRAM

Key elements of the existing Land Use/Transportation Analysis Program are preparation of the Traffic Impact Analysis Report (TIA Report), dissemination and use of the resulting information by the local jurisdictions as a basis for making land use decisions, and mitigation of the impacts of a land use decision on the CMP system. The TIA Report has been designed to provide an improved basis for making land use decisions which could affect the regional transportation system. The TIA Report format requires use of consistent, analytically sound procedures to forecast impacts, define and test mitigations, and to evaluate mitigation costs. Copying of TIA Reports to the CMA is required to enable the CMA to fulfill its legal obligation to monitor compliance with the program, and to provide documentation for the CMP database.

As previously noted, the content and focus of the TIA Report will change within portions of the county for which areawide deficiency plans based on the CTP have been adopted and are being implemented. Within such areas, the CMP TIA Report process can be streamlined so long as land use decisions are consistent with the growth assumptions, developed by SCAG in accordance with local input, on which the CTP and the deficiency plan are based.

Impacts of land use changes that are inconsistent with the growth forecasts on which the CTP is based may not be appropriately addressed by the areawide deficiency plan. These situations may therefore require an analysis similar to that conducted under the current guidelines, which will remain applicable to areas in which no deficiency plan has been adopted.

The current TIA Report format, required as part of the Land Use/Transportation Analysis Program , focuses on land use changes, with an emphasis on anticipating future impacts of these changes and

identifying adequate mitigations. It is designed to inform local decision makers of the nature and costs of adequate mitigations so that at the local jurisdiction's discretion, adequate mitigations can be required as a condition of project approval. The TIA Report is not a deficiency plan, which is a transportation facilities oriented report required when a LOS standard is exceeded. A deficiency plan must also identify the underlying causes of the deficiency, which may be specific land use changes or development projects.

Planning for improvements only after a deficiency occurs may seriously jeopardize a jurisdiction's ability to gain needed right-of-way, develop feasible mitigations, and ensure that those who contribute to the deficiency help to solve the problem. Thus, the Land Use/Transportation Analysis Program is a significant tool within the CMP framework, along with the annual transportation modeling and areawide deficiency plans, to help anticipate and plan for future transportation improvements.

Because the CTP is designed to identify the transportation system improvements, strategies, and costs of maintaining mobility in light of cumulative growth, the planning aspect of the Land Use/Transportation Analysis Program can be both streamlined and improved in the future by reliance on the CTP and corresponding areawide deficiency plans to identify appropriate actions, rather than individual project-specific analysis. However, this approach requires consistency between the project in question and the growth assumptions used to develop the CTP and the deficiency plan.

In addition to the evaluation of specific development projects, provision is made for the traffic impact analysis of general plan revisions and amendments, and specific plans that would result in land use changes that exceed the specified thresholds.

Although the Land Use/Transportation Analysis Program's TIA Report is structured to further the goals of the CMP, local agencies and Caltrans can use the data and format for the traffic or circulation portions of California Environmental Quality Act (CEQA) and National Environmental Protection Act (NEPA) documents. An expected outcome of the program is a more efficient, consistent process of analyzing project impacts on the regional transportation system for use at all levels of government.

Mitigation of the impacts of land use decisions on CMP roadways across jurisdictional boundaries is a major concern of the program. The TIA Report and subsequent interagency review process provide one mechanism to address that concern. With the completion of the CTP and adoption of areawide, multijurisdictional deficiency plans, issues of this kind are more likely to be anticipated and avoided.

Prior to adoption and implementation of a deficiency plan, CMP TIA Reports shall be prepared by or at the direction of the local jurisdiction with land use authority when a change in land use, a development project, or at local discretion, a group of projects are forecast to generate 250 (1,000 for retail uses or projects) two-way peak hour trips based on trip generation rates published for the applicable use or uses in the Institute of Transportation Engineers' Trip Generation or other CMA-approved data source. Pass-by trips are excluded in this determination.

However, at any time other locally determined criteria may be used which are more stringent than those identified above. All TIA Reports shall be submitted to the CMA. If a TIA Report indicates that the project or projects would add 80 or more 2-way peak hour trips to a CMP arterial within an adjacent jurisdiction or 100 or more 2-way peak hour trips to a freeway within an adjacent jurisdiction, the TIA Report shall be submitted to the adjacent jurisdictions as well. The agency responsible for the TIA Report shall consider comments from other jurisdictions, the CMA, and

Caltrans prior to certification of that analysis as consistent with the CMP guidelines.

The traffic volume thresholds (80 added peak hour trips to an arterial and 100 to a freeway) are intended to determine when a local jurisdiction is required to provide a copy of a TIA Report to a neighboring jurisdiction. They are not used to determine if a TIA Report needs to be prepared. These volume thresholds also define the limit of the geographic area that needs to be analyzed in a TIA Report (i.e., the analysis does not need to be conducted for any intersections or segments when the number of project-related peak hour trips is less than the specified volume thresholds). Regardless of project-related volumes, a TIA Report analysis is only required to extend a five mile radius from the project site without regard for jurisdictional boundaries, unless a continuation of the analysis is desired by the permitting jurisdiction.

TIA Reports shall be provided to the CMA and adjacent jurisdictions so that information exchange and communication can occur in concert with the permitting jurisdiction's project review schedule and prior to any approval or permit activity. Agencies which receive TIA Reports shall provide any comments no later than 15 working days from the date the TIA Report was received by SANBAG, unless otherwise notified by the permitting jurisdiction. Should the comments received from adjacent jurisdictions, the CMA, Caltrans, or transit agencies recommend changes to the TIA Report, the permitting jurisdiction shall consider comments received and make changes deemed necessary by the permitting jurisdiction. Should the changes be such that the permitting jurisdiction chooses to recirculate the document, the commenting agencies shall complete the review of the revised document no later than 10 working days from the date unless otherwise notified. This process is intended to be consistent with any actions required under the local Land Use/Transportation Analysis Program.

The program is structured to assure that TIA Reports, and responses to reports, are conveyed between the local jurisdiction making a land use decision and potentially impacted jurisdictions. The CMA will maintain a log and file of reports received, as well as a record of communications regarding projects.

If local jurisdictions wish communications to be on record with the Congestion Management Agency, it should receive copies to be logged and filed. The CMA is available to serve as a clearinghouse for such communications regardless of the size of the subject project. These communications will document forecast implications of land use decisions and, if deficiencies arise which are attributable to another jurisdiction's land use decisions, can be a basis for interjurisdictional sharing of the responsibility to mitigate transportation impacts. The CMP also provides a procedure for resolution of interjurisdictional conflicts (Appendix F).

Local jurisdictions which believe that portions of the CMP roadway system within their boundaries are likely to be impacted by a land use decision within an adjacent jurisdiction may request, but cannot require, that the adjacent jurisdiction prepare a TIA Report on the subject project.

Following adoption and implementation of a deficiency plan, CMP TIA Reports shall be prepared by or at the direction of the local jurisdiction to first determine if a change in land use, a development project, or a group of projects are consistent with growth assumptions contained in the CTP and deficiency plan. If consistency is determined, actions identified within the CTP and deficiency plan should be adequate to maintain the desired level of system performance if implemented at the appropriate time. It is then the role of the Land Use/Transportation Analysis Program to: 1) identify the appropriate implementation schedule for actions already identified within the deficiency plan to maintain mobility on the multimodal transportation

system in the vicinity of the project, and 2) identify project-specific mitigations on local facilities not addressed by the CTP and the deficiency plan.

If the land use change, development project, or group of projects is determined to not be consistent, actions identified within the CTP and deficiency plan may not be adequate to maintain the desired level of system performance. In this case, it is the role of the Land Use/ Transportation Analysis Program to: 1) identify the appropriate implementation schedule for those actions already identified within the deficiency plan to help maintain mobility on the multimodal transportation system in the vicinity of the project, 2) develop other mitigations needed to augment those previously identified in the deficiency plan to meet the mobility objectives of the CTP, 3) identify project-specific mitigations on local facilities not addressed by the CTP and the deficiency plan, and 4) provide information to be incorporated into updates of the regional growth forecast, CTP and RTP, and the deficiency plan to reestablish consistency.

Appendix C provides the detailed guidelines for preparing TIA Reports to address changes in land use, development project, or group of projects prior to adoption and implementation of an areawide deficiency plan that encompasses the project area. Variations in the program may be accommodated at the discretion of the CMA Board, but consistent implementation by all jurisdictions is essential to the program's success.

Additional detailed guidance for preparing TIA Reports in areas encompassed by adopted deficiency plans will be developed through the CMP TAC and its subcommittees, and will be incorporated into Appendix C at the discretion of the CMA Board of Directors.

4.B.2 THE LAND USE/TRANSPORTATION ANALYSIS PROCESS

4.B.2.1 Steps in the Process

Prior to adoption of an areawide deficiency plan that encompasses the project areas, the steps involved in the process are as follows (refer to Figure 4-1):

- A development application is submitted to a local jurisdiction, or a general plan amendment, revision or specific plan is proposed.

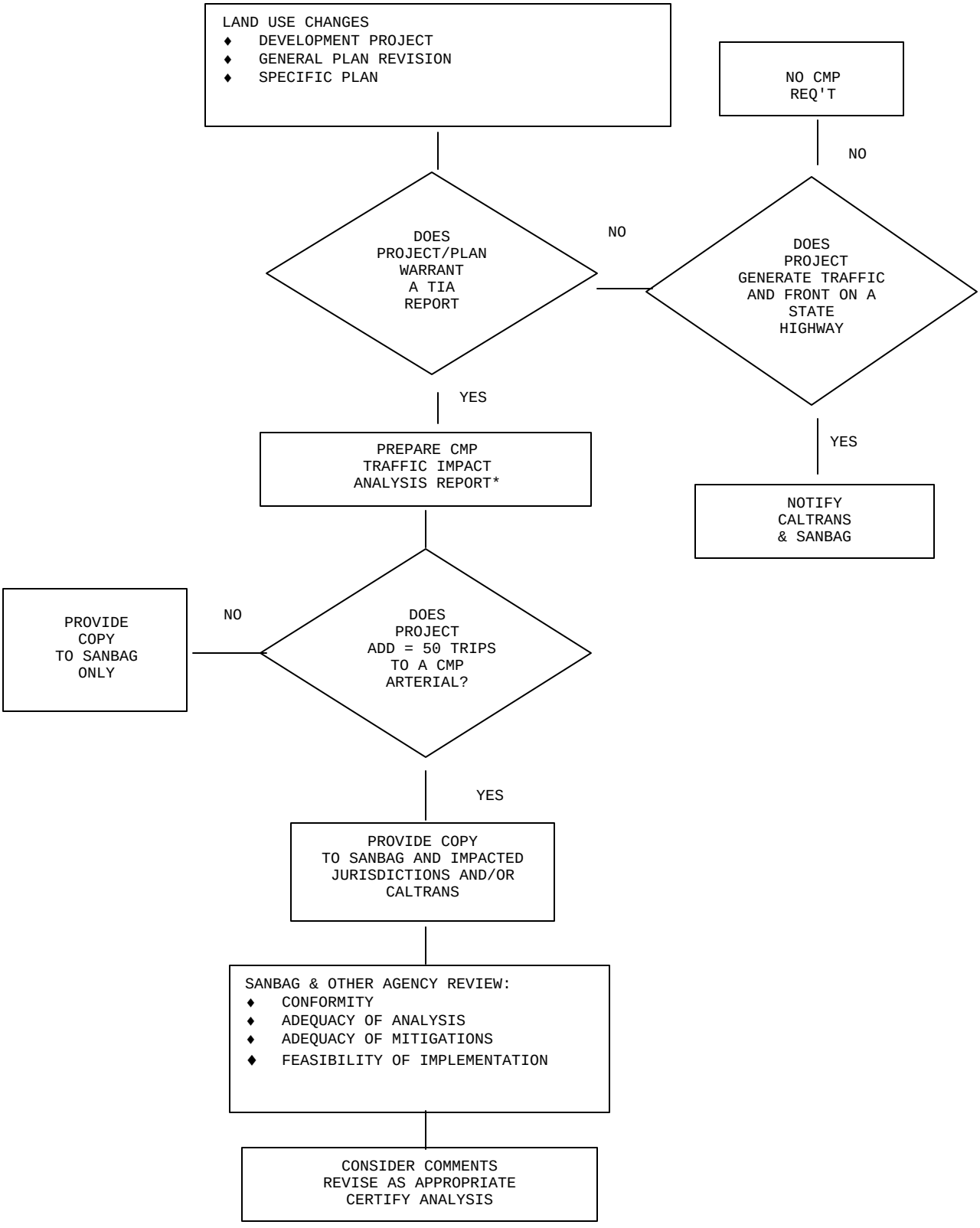
- If the local jurisdiction determines that project review is required, based on local criteria and thresholds or the thresholds for required preparation (Section 4.B.2.2), the local jurisdiction provides the applicant with the standardized TIA procedures and report format or otherwise arranges for the TIA Report to be prepared.

- If the specified thresholds are not met, no TIA Report is required. However, within federally designated urbanized areas, Caltrans and the CMA shall be notified by the local jurisdiction for proposed traffic-generating projects (other than a single family residence) which share a property line in common with a State highway, or where any portion is on a roadway which intersects a State highway, and is within 500 feet of that intersection, including interchange ramps. The purpose of this requirement is to provide Caltrans with advance warning of an opportunity to acquire right-of-way for additional through lanes or turning lanes at intersections on the CMP roadway system. Making the improvements after the development is already in place is much more difficult, costly, and reliant on public financing.

- Land use/transportation analysis of general plans, general plan revisions and amendments, and specific plans is required if the change in land use at buildout meets or exceeds the specified threshold. Nearly

all major general plan revisions and many specific plans are expected to exceed the thresholds for TIA Report preparation.

- The local jurisdiction is the lead agency for preparation of the TIA Report. The funding source for the preparation of the TIA will be determined at the discretion of the lead agency. The procedural guidelines and assumptions for the preparation of the TIA Report are contained in Appendix C. Issues associated with use of alternate assumptions should be settled before the analysis is actually begun. Some local jurisdictions may choose to conduct a "methodology meeting" in advance of the preparation of the TIA Report and document the expectations in writing. The CMA shall be provided a copy of documentation of procedures and assumptions that vary from those contained in Appendix C. This should be provided immediately after agreement is reached between the applicant and the local jurisdiction. The TIA Report shall include an analysis of the costs of mitigating the impacts of full project implementation, or development through the year 2020 under a planning document. The TIA Report should separately identify the costs for improvements on Caltrans roadways and the impacted CMP roadways in other jurisdictions. The TIA Report shall include a determination of any credits due the project applicant, pursuant to Section 65089.(b)(4) of the California Government Code.



*CAN BE INTEGRATED WITH ENVIRONMENTAL DOCUMENT OR CONDUCTED SEPARATELY, AT AGENCY'S DISCRETION

Figure 4-1. Flow of Recommended Land Use/Transportation Analysis Process

- The local jurisdiction shall provide a copy of the completed TIA Report to the CMA and to each potentially impacted local jurisdiction (and Caltrans for State roadways), as defined by the traffic volume thresholds of 80 added 2-way peak hour trips on arterials and 100 added trips on freeways.

- Potentially impacted jurisdictions and agencies will review the TIA Reports provided by the permitting jurisdiction (lead agency) and provide technical comments to the lead agency. At the impacted agency's discretion, technical comments may also be directed to the CMA. The CMA may also provide technical comments to the lead agency. The review period for the CMA, Caltrans, and local jurisdictions shall be no more than 15 working days from the date of receipt by the CMA unless otherwise stipulated by the lead agency. Documents received by the CMA are to be logged and filed as part of the required database on traffic impacts, and as information to be used to apportion mitigation costs among jurisdictions which can be shown to have contributed significantly to the impact.

- The local jurisdiction shall consider the responses of potentially impacted jurisdictions and Caltrans, and comments of the technical analysis by the CMA, during deliberations on project or plan approval. An impacted jurisdiction may request to meet with the impacting jurisdiction (lead agency) to resolve technical issues associated with the TIA, which may include the magnitude of an impact, location of an impact, timing of an impact, nature of the proposed mitigation, estimated cost of mitigation, and apportionment of responsibility to mitigate the impact.

- Forecast interjurisdictional impacts of a project are to be mitigated through a facility improvement or strategy developed jointly by the lead agency and impacted jurisdiction. Potential interjurisdictional impacts can be mitigated through implementation of strategies by the lead agency. However, if improvements within another jurisdiction are proposed as mitigations, financial mechanisms through which the costs to mitigate interjurisdictionalimpacts are addressed may include, but are not limited to, interjurisdictional agreements through which the lead (impacting) agency will reimburse the impacted jurisdiction for a proportionate share of the costs to mitigate the impact or deficiency.

- A jurisdiction in which the CMP system is impacted by another jurisdiction's land use decision should be compensated for any mitigations required within the impacted jurisdiction at the time of project approval. If this is not the case, and a deficiency plan is later required to address the impacted portion of the CMP system, the TIA Report will be used as a basis to apportion the responsibility to mitigate the deficiency within the impacted jurisdiction.

- If resolution between the lead agency and a potentially impacted jurisdiction cannot be achieved, the impacted jurisdiction may request (but cannot require) the lead agency to condition approval of a project on monitoring of traffic and/or travel characteristics to and from the project site, and provision of mitigation as warranted based on the results of monitoring. At the lead agency's discretion, this may be required of a project as a mechanism to verify the magnitude of the impacts of a specific project on CMP roadways, and

provide for mitigations as needed following project approval.

- Following consideration of any comments by potentially impacted jurisdictions and the CMA, and revisions to the TIA Report as appropriate, the lead jurisdiction certifies that the analysis is consistent with the CMP guidelines.

4.B.2.2 **Criteria for TIA Report Preparation and Review**

Prior to adoption and implementation of a deficiency plan encompassing the subject area, CMP TIA Reports shall be prepared by or at the direction of the local jurisdiction with land use authority when a change in land use, a development project, or at local discretion a group of projects, are forecast to add or generate 250 (1,000 for retail uses or projects) two-way peak hour trips based on trip generation rates published for the applicable use or uses in the Institute of Transportation Engineers' Trip Generation or other CMA-approved data source.

However, other locally determined criteria may be developed which are more stringent than those identified above. Individual development projects or proposed land use changes in the same geographic vicinity that can reasonably be combined into a single project for analysis purposes can be analyzed as a single project. The threshold determination is a self-certification process. A project (or projects which are examined together) which exceeds the specified thresholds or criteria, and for which development applications were submitted after the date of CMP approval by the CMA Board, requires submittal of a TIA Report.

For mixed use developments, the size of each proposed use shall be applied to the trip generation rate for that land use type, and the results of all such calculations shall be totaled to determine if the total trip generation meets or exceeds the CMP threshold or if applicable, a more stringent local threshold.

Projects shall not be split to avoid the CMP requirements. If an additional phase of a project, when added to the preceding phases, causes the sum of the phases to exceed the threshold, the entire project must be analyzed as a unit. The analysis must be conducted when the phases are anticipated and should not wait for later phases, even if earlier phases alone would not exceed the threshold.

If it is determined that a CMP TIA Report is required, the entity with local land use authority shall prepare or cause to be prepared a Traffic Impact Analysis Report consistent with the procedure and methodology specified in Appendix C and the local jurisdiction's Land Use/Transportation Analysis Program.

If it is determined that a project qualified for the preparation of a TIA Report but no report was prepared, adjacent potentially impacted jurisdictions, SANBAG, or Caltrans may request that such a report be prepared, even though it may be after-the-fact. The permitting jurisdiction shall prepare, or cause to be prepared, a TIA Report in order to determine appropriate mitigation measures and financial responsibilities for resolution of the ongoing CMP system impacts and for developing appropriate mitigations for future development projects.

Any questions that arise on the interpretation of the program should be referred to CMA staff. It is in a jurisdiction's own interest to undertake CMP TIA Report preparation to avoid future impacts on the regional transportation system, and financial responsibility to mitigate them.

4.B.2.3 **Summary of Agency Responsibilities**

CMA Responsibilities

- In cooperation with local jurisdictions, develop and maintain the Land Use/Transportation Analysis guidelines to be adopted by local jurisdictions.
- Determine conformance of locally adopted Land Use/Transportation Analysis programs (Government Code Section 65089.3).
- Review TIA Reports for technical consistency.
- Participate as needed in discussions on the potential interjurisdictional impacts of land use decisions, mitigation of potential deficiencies, and fair apportionment of responsibility for mitigation, at the request of a lead agency or a potentially impacted jurisdiction.
- Maintain the TIA Report guidelines and coordinate modification of the guidelines as needed to define streamlined procedures available to local jurisdictions in which areawide deficiency plans have been adopted. Modifications are to be developed in cooperation with the CMP TAC, and approved by the CMA Board. The modified guidelines are to be distributed to all local jurisdictions, transit agencies, and Caltrans.
- Monitor the development of other regional programs and plans and identify any necessary modifications to the Land Use/Transportation Analysis Program to maintain consistency.
- Assist the air districts to identify transportation control measures or other transportation strategies which will receive credit toward significant air quality improvements
- Assist in making traffic, transit, and TDM data available to local agencies for purposes of preparing CMP TIA reports.
- In cooperation with SCAG and the local jurisdictions, plan for and implement a regional database of existing land use, approved changes in land use, and proposed changes in land use.
- In cooperation with SCAG, make data available from the CMP model for use in local models.
- Maintain a log and file of TIA Reports received, formal responses to TIA Reports received, and dates of submission of responses to the lead agency as part of the required database on traffic impacts.
- Develop guidelines, in cooperation with local jurisdictions and Caltrans, for traffic monitoring programs potentially needed to monitor traffic generated by certain development projects.
- In cooperation with local jurisdictions, develop the CTP for regional facilities and strategies, which identifies impacts and needs created by development projects, including the cumulative impacts of projects.
- Use the CTP process as a way to identify the set of preferred transportation improvements and programs needed to offset the cumulative impacts of growth on the regional transportation system, and to determine how they should be funded.
- Maintain, refine, and as needed, facilitate use of the conflict resolution procedure within the CMP to provide administrative remedies to interjurisdictional disagreements.

Local Jurisdiction Responsibilities

- Adopt and implement the Land Use/Transportation Analysis Program. The adopted program shall be generally consistent with the CMA-adopted program.
- Act as lead agency for preparation of TIA Reports.
- Implement local transportation models or analytical procedures capable of analyzing the impacts of land use decisions on the regional transportation system, both within the jurisdiction and in adjacent jurisdictions.
- Provide copies of TIA Reports directly to all other jurisdictions in which project-imposed impacts are identified.
- Provide a copy of each TIA Report to the CMA and list jurisdictions to which the TIA Report is being sent.
- Incorporate consideration of TIA Report results and responses of other jurisdictions on TIA Reports into the land use decision and traffic impact mitigation process, and certify that the analysis is consistent with the CMP guidelines.
- Participate as needed in discussions on potential interjurisdictional impacts of land use decisions, mitigation of potential deficiencies, and fair apportionment of responsibility for mitigation.
- Respond to TIA reports prepared by other jurisdictions and bring traffic impact issues to their attention.
- Within federally designated urbanized areas, notify Caltrans and the CMA of traffic-generating projects (other than single family residences) with a property line in common with a State highway or within 500 feet of a State highway along an intersecting street.
- Require traffic monitoring programs for certain development projects to confirm follow-through of commitments made to the agencies impacted by that development.
- Work with the CMA and other jurisdictions to develop the CTP, and participate in use of the CTP planning process to develop a program to comprehensively address the cumulative impacts of local land use decisions on the regional transportation system.

Southern California Association of Governments (SCAG) Responsibilities

- Conduct annual CMP model runs.
- Make models and model data available to local agencies for purposes of preparing TIA Reports.
- Maintain and update socio-economic data sets for models.
- In cooperation with the appropriate air district, assist in the quantification of air quality benefits to be derived from implementation of areawide deficiency plans.

Caltrans Responsibilities

- Make traffic count information available to local jurisdictions preparing TIA Reports.
- Review CMP TIA Reports, provide a response to the impacting jurisdiction through the CMA, and enter into

discussions on the resolution of impacts on State roadways as appropriate to each situation.

Transit Agency Responsibilities

- Make transit information available to local agencies preparing TIA Reports.

- Review CMP TIA Reports as submitted by local jurisdictions, provide comments to the requesting jurisdiction, adjacent impacted jurisdictions, and the CMA, and participate in the process to resolve identified impacts.

SCAQMD and MDAQMD Responsibilities

- Identify transportation control measures or other transportation strategies which will receive credit toward significant air quality improvements if implemented through deficiency plans.

- Participate with the CMA and local jurisdictions in defining the role of air quality analysis in TIA Reports.

5. TRAVEL DEMAND MANAGEMENT ELEMENT

The Congestion Management Program emphasizes maintenance of mobility for people and goods through many strategies, while helping to improve air quality. Strategies which can help to maintain mobility in ways that are consistent with achieving our air quality goals include those which focus on reductions in trip making, trip length, and travel demand, as well as those which increase the availability of modal alternatives to the single occupant vehicle. This chapter provides a framework for trip reduction and travel demand management for the CMP.

5.A LEGAL REQUIREMENTS

California Government Code Section 65089 (b) (3) states the requirements for the travel demand management element:

> "(A) The program shall contain . . . a travel demand element that promotes alternative transportation methods, including, but not limited to, carpools, vanpools, transit, bicycles, and park-and-ride lots; improvements in the balance between jobs and housing; and other strategies, including, but not limited to, flexible work hours, telecommuting, and parking management programs. The agency shall consider parking cash-out programs during the development and update of the travel demand element.

5.B BENEFITS OF THE PROGRAM

Travel Demand Management can provide the following benefits:

- Increases mobility of people and goods at a minimal capital cost by improving system efficiency and maximizing system utility.
- Increases and integrates modal options by ensuring that actions are supportive of alternative modes.
- Encourages use of alternatives to the single occupant vehicle to reduce vehicle trips and vehicle miles traveled.
- Improves overall system performance by maintaining mobility for people and goods while reducing vehicle demand.
- Integrates air quality planning requirements with transportation planning and programming functions.

5.C IMPLICATIONS OF THE PROGRAM

The Travel Demand Management Element has linkages to other regional and local transportation and air quality plans and programs, transit plans, general plans, and related land use plans. This section describes some of those interrelationships and implications of the program.

Table 5-1 presents a list of trip reduction and travel demand management measures compiled by Inland Empire Commuter Services. The list indicates whether the strategies satisfy the objectives of mobility, air quality, or both.

5.C.1 LINKAGES WITH THE SCAQMD AND MDAQMD

The air districts have a prescribed role in the development and implementation of the CMP. CMP legislation requires that the CMP be developed "in consultation with, and with the cooperation of," the local air quality management districts. The districts are also required to "establish and periodically revise a list of approved improvements, programs, and actions" that local jurisdictions can incorporate into deficiency plans to "measurably improve multimodal performance..., and contribute to significant improvements in air quality." Finally, the law requires that the CMA consult with the air quality management districts before it calculates the impacts of traffic subject to exclusion pursuant to Government Code Section 65089.4(b)and (f).

The integration of transportation control measures from the plans of the air quality management districts, which are in turn consistent with the regional mobility strategy defined in the Regional Transportation Plan, is important for a variety of reasons. It results in the selection of strategies to maintain mobility that are also consistent with the district strategies to attain air quality standards in accordance with deadlines established by the Federal Clean Air Act. It also recognizes that most transportation control measures (TCM's) are needed to meet mobility goals as well as to improve regional air quality. Finally, it allows local governments to implement both mobility and air quality programs (Regional Transportation and Comprehensive Transportation Plans, CMP, and air plans) through one set of actions.

All elements of the CMP must be consistent with the applicable air district plan. In addition, Government Code Section 65089 (b)(3) provides that a city or county in which a development will implement a parking cash-out program which is included in a congestion management program or deficiency plan shall grant to that development an appropriate reduction in the parking requirements otherwise in effect for the new commercial development. In the case of existing commercial development that has implemented a cash-out program included in a CMP or deficiency plan, the city or county shall grant an appropriate reduction in the otherwise applicable parking requirements based on the demonstrated reduced need for parking, and the space no longer needed for parking purposes may be used for other appropriate purposes.

Transportation control measures to reduce congestion and improve air quality are identified and described within the respective air district plans, and are incorporated into this document by reference. For several of these measures, the air districts may adopt rules with future effective compliance dates.

The nature of Deficiency Plan actions for which credit can be gained for systemwide level of service and air quality improvements has been an issue for some time. Credit may, subject to air district approval, accrue to localities or subregions through the ability to implement local or subregional programs in lieu of district implementation of Indirect Source Rules (ISR'S). Eligibility for such substitution is contingent on the local or subregional program being enforceable, and forecasting levels of emission reduction equal to or greater than that which would be achieved through implementation of the ISR's within that area, based on calculation methods subject to air district approval. The areawide Deficiency Plans contemplated in accordance with SANBAG policy and the 1997 CMP update could provide the enforceable mechanisms for such substitution programs. The MDAQMD has also developed a draft list of deficiency plan elements for the Desert jurisdictions.

5.C.2 RELATIONSHIP TO LOCAL JURISDICTION GENERAL PLANS AND ORDINANCES

Local jurisdiction general plan circulation elements often include policies and actions to encourage alternative transportation mode choices. The land

use element of the general plans may contain policies promoting a balance between jobs and housing. Zoning ordinances may enforce these policies. Local jurisdictions are now required to grant appropriate levels of reduced parking requirements if cash-out programs are implemented by new or existing commercial development pursuant to Government Code Section 65089(d)(1) and (2).

Transportation control measures undertaken in accordance with the provisions of the MDAQMD's Plan are likely to be implemented by the Air District.

5.C.3 RELATIONSHIP TO THE REGIONAL TRANSPORTATION PLAN

SCAG's Regional Transportation Plan (RTP) identifies transportation demand management as a principal component of the regional mobility strategy. In addition to developing and updating the plan, SCAG is responsible for finding it to be in conformance with Federal Clean Air Act requirements. Given that the CMP is to be consistent with the RTP, CMP TDM measures must be consistent with the measures in the RTP.

5.C.4 RELATIONSHIP TO INLAND EMPIRE COMMUTER SERVICES (IECS)

IECS delivers rideshare matching services and information on commute alternatives. It can assist in providing marketing information and alternative commute mode statistics and in implementing adopted travel demand management measures. Actual ridematching documents are produced by SCAG.

5.C.5 RELATIONSHIP TO TRANSIT PROVIDERS

Transit providers have short range transit plans, marketing incentive programs, and passenger survey information which can assist in developing and implementing transportation demand management strategies. Through the Comprehensive Transportation planning process, the CMA consults with transit providers to maintain consistency between proposed transportation demand management measures and the transit services provided in the various areas of the county.

5.D OBJECTIVES, POLICIES, AND ACTIONS

Objective 5.1 Trip Reduction - Reduce the number of vehicle trips while maintaining personal mobility.

Policy 5.1.1 - Provide incentives and help to remove obstacles for transit, ridesharing, and reduced person-trips.

Action

RESPONSIBILITY: The CMA in cooperation with local jurisdictions, Caltrans, and transit agencies.

Action Provide reduced-toll incentives for carpools and vanpools if toll facilities are developed in San Bernardino County.

RESPONSIBILITY: Caltrans.

Action Maintain performance measures in the CMP that are sensitive to the effectiveness of trip reduction and travel demand management strategies.

RESPONSIBILITY: The CMA in cooperation with local jurisdictions, transit providers, and Caltrans.

Action Ensure operation of HOV facilities at a higher LOS than mixed flow lanes within San Bernardino County as an incentive for multi-occupant vehicle travel.

RESPONSIBILITY: The CMA and Caltrans.

Action Grant new commercial development which will implement a parking cash-out program appropriate reductions in parking requirements otherwise in effect, and grant existing commercial development which has implemented a parking cash-out program an appropriate reduction in parking requirements otherwise applicable based on the demonstrated reduced need for parking.

RESPONSIBILITY: Local governments and the CMA.

Action Maintain an effective regional system of carpool and vanpool matching.

RESPONSIBILITY: Southern California Associated Governments Rideshare Department (SCAG).

Policy 5.1.2 - Facilitate and provide incentives or non-auto travel.

Action Study and recommend methods for encouraging transit, pedestrian and bicycle-oriented development. Conduct this activity in conjunction with implementation of the Countywide Bicycle Plan and local livable communities initiatives.

RESPONSIBILITY: The CMA and SCAG to coordinate, local jurisdictions to participate as desired.

Objective 5.2 Reduce the length of trips while maintaining personal mobility.

Policy 5.2.1 - Provide incentives for reducing vehicle trip lengths.

Action Encourage job creation in San Bernardino County through development and implementation of transportation investment strategies which increase the county's ability to attract basic industry.

RESPONSIBILITY: The CMA, local jurisdictions, SCAG, and Caltrans.

Action Study and recommend methods for encouraging transit, TDM, pedestrian, and bicycle-oriented development.

RESPONSIBILITY: The CMA and SCAG to coordinate, local jurisdictions to participate as desired.

Objective 5.3 Improve air quality.

Policy 5.3.1 - Implement, document, and monitor local transportation control measures in a manner consistent with the appropriate air quality plan(s).

Action Continue to implement transportation control measures in accordance with the CMP requirements.

RESPONSIBILITY: Local jurisdictions.

Table 5-1

TDM MODEL ORDINANCE OPTIONS

To comply with CMP requirements, cities must adopt a TDM ordinance.

If a city wishes to adopt an ordinance to actively manage congestion within its boundaries, Inland Empire Commuter Services has developed a matrix illustrating different techniques available and whether they impact air quality, congestion management, or both.

Strategies emphasizing air quality mean those which eliminate cold starts

TDM ORDINANCE PROVISION OPTIONS	STRATEGIES EMPHASIZING AIR QUALITY	STRATEGIES WHICH HELP CONGESTION MANAGEMENT
Regulate Medium and Large Employers	♦	♦
Regulate Multi-Tenant Building Owners	♦	♦
Regulate Developers	♦	♦
Require Mixed Use	♦	♦
Require Amenities that Reduce Need for Trips	♦	♦
Design Guidelines for Transit, Vanpools, Walking, and Bicycling	♦	♦
Increase Residential Densities at Transit Stations		♦
Fee Credits for Building Designs which Promote TDM Measures	♦	♦
Fee Credits for Building Remote Park & Ride Facilities		♦
Parking		
Preferential Parking for Ridesharers	♦	♦
Subsidized Parking for Ridesharers	♦	♦
Remote Park & Ride Lots with Amenities		♦
Support Zoning Code Variances for Commercial Uses Within Park & Ride Facilities		♦
Provide Bicycle Parking	♦	♦
Lower Development Sq./Ft. Ratios and Maximum Limits		♦
Transportation Allowance Instead of Subsidized Parking	♦	♦

Table 5-1 continued

TDM ORDINANCE PROVISION OPTIONS	STRATEGIES EMPHASIZING AIR QUALITY	STRATEGIES WHICH HELP CONGESTION MANAGEMENT
Ridesharing		
Rideshare Transportation Allowances	♦	♦
Ridesharing Subsidy, Tax Credits or Fees for Solo Commuters	♦	♦
Ridesharer Parking Cost Subsidy	♦	♦
Ridematching	♦	♦
Guaranteed Ride Home	♦	♦
Flex-Time		♦
Compressed Work-week	♦	♦
Telecommuting from Home	♦	♦
Telecommuting from Satellite Work Center		♦
Transit subsidies	♦	♦
Commuter Stores or Marketing Programs	♦	♦
Expanded On-Site Amenities	♦	♦
Walking		
Showers and Lockers	♦	♦
Safe Walking Routes	♦	♦
Bicycling		
Showers and Lockers	♦	♦
Bicycling Information (Maps)	♦	♦

Strategies emphasizing air quality mean those which eliminate cold starts

Policy 5.3.2 - Ensure that other congestion management measures adopted by local jurisdictions and Caltrans do not have negative effects on air quality.

Action Conduct an air quality conformity review for all CIP projects in the CMP.

RESPONSIBILITY: SCAG.

Action Maintain a list of air quality-compatible measures for the CMP.

RESPONSIBILITY: SCAQMD and MDAQMD.

5.E SUMMARY OF RESPONSIBILITIES

CMA Responsibilities

- Assist the SCAQMD and MDAQMD in development and maintenance of a menu of mitigation measures compatible with air quality requirements for consideration in deficiency plans, TIA Reports, and related studies.
- Encourage job creation in San Bernardino County through development and implementation of transportation investment strategies which increase the county's ability to attract basic industry.
- If desired by local jurisdictions, participate and assist in development of CMP Deficiency Plans which yield emission reductions that can be substituted for Indirect Source Rules.
- Assist SCAG in conducting air quality conformity determinations, with consultation of the Air Districts, for all CIP projects in the CMP.
- Prioritize capital projects that include High Occupancy Vehicle (HOV) lanes, facilitate non-motorized travel, and provide other time or price-related incentives for transit and ridesharing, or other vehicle trip reduction.
- Study and recommend methods for encouraging transit, TDM, pedestrian, and bicycle-oriented development.

Local Jurisdiction Responsibilities

- Include in deficiency plans, TIA Reports, and related studies only those mitigation measures deemed by SCAQMD and MDAQMD to be compatible with air quality requirements.
- Continue implementation of transportation control measures in accordance with CMP.
- Encourage job creation in San Bernardino County through strategies which increase the county's ability to attract basic industry.
- Study and consider methods for encouraging transit, TDM, pedestrian, and bicycle-oriented development.
- Grant new commercial development which will implement a parking cash-out program appropriate reductions in parking requirements otherwise in effect, and grant existing commercial development which has implemented a parking cash-out program an appropriate reduction in parking requirements otherwise applicable based on the demonstrated reduced need for parking.

Air District Responsibilities

- Develop and maintain a list of air quality-compatible mitigation measures for consideration in deficiency plans, TIA Reports, the CMP CIP, and related documents.

- Review ordinances, plans, and programs of local jurisdictions to ensure consistency with State law.

Caltrans Responsibilities

- For any toll facilities in San Bernardino County, provide reduced-toll incentives for carpools and vanpools.

Transit Agency Responsibilities

- Participate in formulation and application of multimodal performance measures in accordance with CMP requirements.

Inland Empire Commuter Services (IECS) Responsibilities

- Maintain TDM-related information and provide assistance to employers and local jurisdictions in implementing the provisions of TDM ordinances.

- In partnership with SCAG Rideshare Department, maintain an effective system of carpool and vanpool matching and formation.

6. MONITORING PROGRAM AND TRANSPORTATION MODELING

The monitoring program addresses several CMP requirements. It provides information on the current traffic levels of service, identifies system deficiencies and the need for deficiency plans, and establishes the framework for determining local jurisdiction conformance with the CMP. The annual modeling conducted as part of the CMP is also discussed in this chapter.

6.A LEGAL REQUIREMENTS

California Government Code Section 65089.3 states the following requirements for the CMP monitoring program:

> "The agency shall monitor the implementation of all elements of the congestion management program. The department is responsible for data collection and analysis on State highways, unless the agency designates that responsibility to another entity. The agency may also assign data collection and analysis responsibilities to other owners and operators of facilities or services if the responsibilities are specified in its adopted program. The agency shall consult with the department and other affected owners and operators in developing data collection and analysis procedures prior to program adoption. At least biennially, the agency shall determine if the county and cities are conforming to the congestion management program, including, but not limited to, all of the following:
>
> (a) Consistency with levels of service standards, except as provided in Section 65089.4.
>
> (b) Adoption and implementation of a program to analyze the impacts of land use decisions, including the estimate of the costs associated with mitigating these impacts.
>
> (c) Adoption and implementation of a deficiency plan pursuant to Section 65089.4 when highway and roadway level of service standards are not maintained on portions of the designated system.

6.A.1 DETERMINATION OF NON-CONFORMANCE

The procedure for and penalties associated with a determination of nonconformance are stated in Government Code Section 65089.5:

> "(a) If, pursuant to the monitoring provided for in Section 65089.3, the agency determines, following a noticed public hearing, that a city or county is not conforming with the requirements of the congestion management program, the agency shall notify the city or county in

writing of the specific areas of nonconformance. If, within 90 days of the receipt of the written notice of nonconformance, the city or county has not come into conformance with the congestion management program, the governing body of the agency shall make a finding of nonconformance and shall submit the finding to the commission and to the Controller.

(b) (1) Upon receiving notice from the agency of nonconformance, the Controller shall withhold apportionments of funds required to be apportioned to that nonconforming city or county by Section 2105 of the Streets and Highways Code.
(2) If, within the 12-month period following the receipt of a notice of nonconformance, the Controller is notified by the agency that the city or county is in conformance, the Controller shall allocate the apportionments withheld pursuant to this section to the city or county.
(3) If the Controller is not notified by the agency that the city or county is in conformance pursuant to paragraph (2), the Controller shall allocate the apportionments withheld pursuant to this section to the agency.

(c) The agency shall use funds apportioned under this section for projects of regional significance which are included in the capital improvement program required by paragraph (5) of subdivision (b) of Section 65089, or in a deficiency plan which has been adopted by the agency. The agency shall not use these funds for administration or planning purposes."

6.A.2 MODELING AND DATA BASE

Modeling and data requirements of the CMP are addressed in Government Code Section 65089(c):

> "The agency, in consultation with the regional agency, cities, and the county shall develop a uniform data base on traffic impacts for use in a countywide transportation computer model and shall approve transportation computer models of specific areas within the county that will be used by local jurisdictions to determine the quantitative impacts of development on the circulation system that are based on the countywide model and standardized modeling assumptions and conventions. The computer models shall be consistent with the modeling methodology adopted by the regional planning agency. The data bases used in the models shall be consistent with the data bases used by the regional planning agency. Where the regional agency has jurisdiction over two or more counties, the data bases used by the agency shall be consistent with the data bases used by the regional agency."

6.B BENEFITS OF THE MONITORING PROGRAM

The monitoring program has the following benefits:

- Establishes responsibility for monitoring of transportation system performance.

- Provides information to support cost-effective programming decisions.
- Provides data to support the analyses conducted as part of the CMP.
- Provides a systematic process for identifying system deficiencies.
- Provides some of the data needed for development of deficiency plans, including information on causes of deteriorating system performance.
- Provides an opportunity for local jurisdictions to submit findings in support of the determination of conformance with the CMP.

6.C IMPLICATIONS OF THE MONITORING PROGRAM

The monitoring program is both the principal source of data for use in characterizing the performance of the transportation system, and the primary enforcement mechanism for the CMP. As indicated in State law, the CMA is required to determine whether local jurisdictions are conforming to the program by maintaining the designated levels of service or adoption and implementation of deficiency plans, and by adoption and implementation of the program to analyze the impacts of land use decisions on the regional transportation system. Under the CMP for San Bernardino County, local jurisdictions and Caltrans are responsible for collecting and submitting data to the CMA on levels of service on the CMP network. Local jurisdictions are responsible for data collection and level of service calculations on local streets and roads. Caltrans is responsible for collecting and reporting data in accordance with this chapter on State Highways within San Bernardino County. The CMA documents this information in the biennial CMP update.

Under Government Code Section 65089.3(a), local jurisdictions are obligated to maintain the level of service at or above the designated standards on the regional transportation system (i.e., CMP network). If the level of service at an intersection or a segment on the CMP system of roads drops below the CMP level of service standard, local jurisdictions must prepare, adopt, and implement a deficiency plan.

A deficiency plan is the mechanism for addressing the deficiency, either by a facility improvement that elevates the level of service to a condition equal to or better than the CMP level of service standard for that intersection or segment, or by implementing strategies that will measurably improve the performance of the system and contribute to significant improvements in air quality. The deficiency plan is prepared jointly and adopted individually by each local jurisdiction found to have contributed to the cause of the deficiency, as a condition of conformance with the CMP (Government Code Section 65089.4, refer to Chapter 8 of the 1997 CMP update). The local jurisdiction where the deficiency was identified is lead agency in preparation of a multijurisdictional deficiency plan.

It is important to note how other components of the CMP interact with the monitoring program. The Land Use/Transportation Analysis Program requires individual development projects to be analyzed for impacts on the CMP system and to develop a plan

for mitigating those impacts. In addition, the annual modeling for the CMP forecasts future deficiencies, so that they can be avoided or addressed through areawide deficiency plans based on the Comprehensive Transportation Plan (CTP) for San Bernardino County. With the preparation of areawide deficiency plans, the Land Use/Transportation Analysis element of the CMP will fulfill additional monitoring functions to supply data needed to phase deficiency plan implementation in accordance with growth. These concepts are discussed in more detail in Chapter 4 (Land Use/Transportation Analysis Program) and Chapter 8 (Deficiency Plans).

6.D OBJECTIVES, POLICIES, AND ACTIONS

The objectives of the monitoring program in San Bernardino County are:

Objective 6.1 Existing operational evaluation - Provide an assessment of existing congestion levels on the CMP network.

Policy 6.1.1 - Provide data and level of service analyses sufficient to evaluate the current operation of the CMP highway network and to determine changes in network operation from year to year.

Action Conduct traffic counts and LOS analysis on an annual basis according to the plan established in this chapter of the CMP.

RESPONSIBILITY: Local jurisdictions for local streets and roads; Caltrans for the State Highway system, including freeways, conventional highways, ramps, and ramp intersections.

SCHEDULE: Annually. Counts to be conducted by end of March each year; LOS analyses to be submitted to the CMA by end of April each year.

Policy 6.1.2 - Provide a cost-effective balance between the amount of data collection and analysis conducted and the resources available. Give priority in analysis to those intersections that have levels of service within one letter grade of the standard.

Action Conduct intersection turning movement counts annually on those intersections within one LOS of the standard. For other key intersections, conduct intersection turning movement counts a minimum of once every three years, except in high growth areas where counts should be conducted more frequently.

RESPONSIBILITY: Local jurisdictions and Caltrans.

SCHEDULE: Annually. Counts to be conducted by end of March each year; LOS analyses to be submitted to the CMA by end of April each year.

Action For those segments potentially identified as deficient (LOS drops below the standard), conduct travel time runs to confirm the deficiency.

RESPONSIBILITY: Local jurisdictions and Caltrans.

SCHEDULE: Annually. Data to be collected by end of April each year; and submitted to the CMA.

Objective 6.2 Estimate the extent and location of future deficiencies on the CMP network.

Policy 6.2.1 - Provide the capability to systematically forecast traffic volumes, LOS deficiencies, and multimodal system performance on the CMP network.

Action Maintain the CMP (CTP) model to produce annual forecasts on the CMP network and other components of the multimodal transportation system.

RESPONSIBILITY: SCAG and the CMA.

SCHEDULE: Annually. Draft forecasts prepared by end of March. Ongoing model maintenance and updating.

Action Predict future deficiencies through the annual modeling process and ensure that they are addressed through existing or new deficiency plans.

RESPONSIBILITY: SCAG and the CMA identify future deficiencies. Local agencies, the CMA, and Caltrans prepare studies to identify and fund their mitigation.

SCHEDULE: Future deficiencies identified annually by the end of March.

Action Maintain current, consistent local transportation models or utilize consistent alternative analytic methods, and utilize such models or consistent methods to analyze the impact of land use decisions, prepare deficiency plans, and perform other activities related to the CMP.

RESPONSIBILITY: Local jurisdictions.

SCHEDULE: Ongoing.

Action Review local transportation models for consistency with the CMP (CTP) model and use local model data to update and improve the CMP (CTP) model.

RESPONSIBILITY: SCAG and the CMA.

SCHEDULE: Ongoing.

Objective 6.3 Provide traffic and land use data to support comprehensive, systematic evaluations of land use changes, alternative highway improvements, and alternative transportation policy options.

Policy 6.3.1 - Maintain comprehensive, accessible transportation and land use data, both existing and forecast.

Action Maintain existing traffic count information (link and turning movement) in a set of data bases that can be easily accessed and shared with multiple agencies.

RESPONSIBILITY: Local jurisdictions for local streets and roads; Caltrans on all State Highways. Counts conducted by others are to be submitted to the maintaining agency.

SCHEDULE: Ongoing.

Action Maintain current land use data as part of ongoing local transportation modeling activities and annually provide this data to the CMA.

RESPONSIBILITY: Local jurisdictions.

SCHEDULE: Ongoing.

Objective 6.4 Establish conformance by local jurisdictions with the CMP.

Policy 6.4.1 - Fulfill legal requirements of the CMP.

Action Confirm implementation of the land use/transportation analysis program and the trip reduction and travel demand management ordinance by local agencies.

RESPONSIBILITY: CMA.

SCHEDULE: Annually by September 30.

Action Confirm the maintenance of level of service standards and the preparation of adequate deficiency plans by local jurisdictions.

RESPONSIBILITY: CMA.

SCHEDULE: Annually by September 30.

Action If local jurisdictions submit findings of conformance with the provisions of the CMP, consider the findings in conjunction with other conformity information.

RESPONSIBILITY: CMA.

SCHEDULE: Annually by September 30.

Action Assess transit system performance using measures contained in the CMP Performance Measures Element.

RESPONSIBILITY: CMA.

SCHEDULE: Annually by September 30.

6.E COMPONENTS OF THE MONITORING PROGRAM

There are several components of the monitoring program for the San Bernardino County CMP:

- Data collection
- Traffic factor development
- Level of service analysis
- Evaluation of transit performance
- CMP conformance determination

6.E.1 DATA COLLECTION

The traffic counting program for the CMP focuses on data required to assess peak hour level of service. Systematic procedures are included in the monitoring program to provide for a cost-effective approach to collecting and maintaining traffic data. Listed below are the traffic counting approaches and responsibilities for each type of roadway in the CMP network. In each case, the following are listed: the specific data requirement, responsibility, procedure, analysis, reporting, and future enhancements.

6.E.1.1 **Freeways**

1. Travel time data. Maintain travel time data during peak periods on a biannual basis.

- Responsibility: Caltrans. Caltrans District 8 has provided written commitment to provide these data in accordance with the

CMP for San Bernardino County and State law.

- Procedure: Established by Caltrans.
- Analysis: Average speed by peak hour.
- Reporting: Biannual Caltrans freeway congestion map provided to the CMA.

2. Traffic counts. Conduct manual mainline peak period traffic counts biannually at approximately 10-mile intervals. Conduct peak period turning movement counts at ramp junctions with arterial streets. Intersections at LOS D, E, or F are counted annually. Intersections at LOS C and better are counted every third year, at a minimum.
- Responsibility: Caltrans.
- Procedure: For freeway mainline, count traffic by direction. For ramp junctions, count turning movements. Count in 15-minute increments, 7 to 9 AM and 4 to 6 PM. Note directions, approaches, and time periods that have slow traffic or long queues.
- Analysis: Produce peak hour mainline ramp and intersection volumes and LOS analysis. Maintain in microcomputer data base.
- Reporting: Caltrans and CMA maintain data base. CMA reports trend data in annual CMP.
- Future enhancements: Build counting capability into future freeway traffic management system and into traffic signal equipment at key intersections.

6.E.1.2 **Urban Arterials**

1. Turning movements. Conduct peak period turning movement counts at signalized CMP intersections and other key intersections. Intersections at LOS D, E, or F in the most recent CMP are counted annually. Intersections at LOS C and better are counted a minimum of every third year, except in high growth areas where they may be counted more frequently.
- Responsibility: Caltrans for all State facilities unless local agency chooses to participate, in which case local agencies and Caltrans jointly determine responsibility.
- Procedure: Count in 15-minute increments, 7 to 9 AM and 4 to 6 PM weekdays, unless there is a mid-day or weekend peak which must also be counted. Note approaches and time periods that have long queues.
- Analysis: Produce peak hour intersection volumes and LOS analysis. Maintain in microcomputer data base.
- Reporting: Caltrans and local agencies forward data to the CMA. CMA maintains data base, and reports trend data in annual CMP.
- Future enhancements: Build counting capability into future freeway traffic management system and into traffic signal equipment at key intersections.

2. Travel Time Runs. For those segments identified by the LOS analysis as being

deficient, travel time runs should be performed to confirm the deficiency.

- Responsibility: Caltrans and local agencies jointly determine responsibility.
- Procedure: Collect a minimum of four peak hour, peak direction runs using the "floating car" method.
- Analysis: Compute average speed on section. Compare with speed in the 2000 Highway Capacity Manual for level of service.
- Reporting: Caltrans and local agencies provide data to CMA. CMA presents results in CMP.
- Future enhancements: Automated travel time data collection using regular commuters.

6.E.1.3 **Other Roadways**

1. Traffic Counts. Conduct turning movement counts at signalized key intersections and automatic machine counts on links. Link counts are to be conducted biannually at locations known or expected to be at LOS D, E, or F. Intersections at LOS D, E, or F are counted every year. Intersections at LOS C and better are counted every third year, at a minimum.

- Responsibility: Caltrans on State facilities unless local jurisdictions choose to participate; then local jurisdictions and Caltrans jointly determine responsibility. Local jurisdictions are solely responsible for local facilities.
- Procedure: For turning movement counts, count in 15-minute increments, 7 to 9 AM and 4 to 6 PM weekdays and other peak recreational hours as necessary. Note approaches and time periods that have long queues. For link counts, record volumes for two full weekdays (or a typical high-season weekend for recreational areas) by direction.
- Analysis: Produce peak hour intersection volumes and link volumes and compute LOS. Maintain in microcomputer data base.
- Reporting: Caltrans and local agencies provide data to CMA. CMA reports trend data in annual CMP.

6.E.1.4 **Traffic Factor Development**

1. Historic Traffic Growth. Factors documenting historic annual traffic growth will be maintained by Caltrans, San Bernardino County, and local jurisdictions.

- Responsibility: County-wide volume growth factors developed by Caltrans and San Bernardino County. City factors developed by the cities.
- Procedure: Caltrans and San Bernardino County to maintain permanent traffic counting stations, sampled at least one week per quarter. Cities may choose to use control stations or quarterly machine counts.

- Analysis: Annual percentage growth in traffic identified for both peak hour and daily volume.

- Reporting: Caltrans and San Bernardino County provide data to the CMA for incorporation into the annual CMP.

2. Seasonal Volume Factors. Seasonal factors will be maintained by Caltrans and San Bernardino County for any necessary countywide seasonal adjustment of volumes. Factors will be derived from permanent traffic counting stations. Local jurisdictions should develop and maintain local seasonal factors, particularly in recreational areas.

6.E.2 LEVEL OF SERVICE ANALYSIS

- Responsibility: Caltrans will conduct LOS analysis for State roadways. Local agencies will conduct LOS analysis for other CMP roadways.

- Procedure: Follow LOS procedures established in Chapter 2 of the CMP.

- Reporting: Caltrans and local agencies provide results, including computer files, to the CMA. The CMA incorporates results into CMP.

6.E.3 TRANSIT MONITORING

- Responsibility: Transit agencies annually report on transit system performance pursuant to the measures identified in the Performance Measures Element, based on review of operations.

- Procedure: Transit agencies annually transmit operational performance data to the CMA.

- Reporting: Transit agencies provide operational statistics to the CMA for publication in CMP. Operational statistics include:
  - Route map
  - Frequency of service by route and corridor
  - Ridership (total and by route for current year and prior two years)
  - Fare structure

6.E.4 CMP CONFORMANCE DETERMINATION

- Deficiency Plans. Local jurisdictions will identify LOS deficiencies in their annual monitoring. Upon completion of the Comprehensive Transportation Plan, deficiency plans are to be prepared and submitted to the CMA within one year of initial identification of a deficiency, based on monitoring, if it is located within an area not already addressed by an areawide deficiency plan.

  The CMA will review deficiency plans and hold a public hearing within 60 days of the receipt of the plan. If the CMA fails to approve the deficiency plan, the participating local jurisdictions are allowed 90 days to modify the deficiency plan or mitigate the deficiency. If the local jurisdictions do not come into conformance with the CMP within 90 days, the CMA Board is obligated to make a finding of nonconformance for all participants and

submit the finding to the California Transportation Commission and the State Controller. Guidelines for the preparation of deficiency plans will be developed for inclusion in Appendix D. If an approvable multi-jurisdictional, areawide deficiency plan is prepared and adopted by some but not all agencies identified as contributing to the impact, any jurisdictions failing to adopt the areawide deficiency plan can be found in nonconformance.

RESPONSIBILITY: Local jurisdictions prepare and adopt areawide deficiency plans, and submit them to the CMA for approval. The CMA Board renders written approval or disapproval of the deficiency plan, with an explanation of the reasons for disapproval. If the problems with the plan are not adequately addressed or remedied, the CMA submits a finding of nonconformance for all participating jurisdictions.

SCHEDULE: Following completion of the CTP, deficiency plans shall be submitted within 12 months of the identification of a deficiency. The deficiency shall be determined by monitoring, and shall be within an area not already encompassed by an areawide deficiency plan.

- Land Use/Transportation Analysis Program. Local jurisdictions are required to adopt and implement a Land Use/Transportation Analysis Program. Chapter 4 presents the program for San Bernardino County. Following the adoption of the program, local jurisdictions are required to implement its provisions. A brief annual report is to be provided to the CMA indicating the number of development projects or plans affected. The CMA will include the information in the biennial CMP update.

RESPONSIBILITY: Local jurisdictions.

SCHEDULE: Information supplied to the CMA on an ongoing basis.

6.E.5 LOCAL JURISDICTION SELF-CERTIFICATION

- Local jurisdiction findings of conformity. A local jurisdiction may, by resolution of its governing body, prepare and submit findings of conformance describing how the local jurisdiction has complied with the CMP provisions of the Government Code Section, and any other provisions of the CMP. At local jurisdiction request, the CMA shall provide local jurisdictions with available monitoring information relevant to the local jurisdiction's conformance requirements to review the monitoring information, prepare and submit the findings prior to the annual conformity review.

RESPONSIBILITY: The CMA and local jurisdictions.

SCHEDULE: Information to be supplied by the CMA by August 30, local jurisdictions provide findings by September 30.

6.F TRANSPORTATION MODELING FOR THE CMP

6.F.1 BACKGROUND

Traffic modeling capability provides several important functions in the implementation of the CMP. Four of these functions are:

- Annual forecasting of or on the CMP network for facility programming purposes.
- Forecasting in conjunction with Traffic Impact Analysis (TIA) reports.
- Forecasting for areawide deficiency plans.

Since the early 1970's, both the Southern California Association of Governments and Caltrans have conducted travel demand forecasting activities in the Los Angeles region. Until the mid 1980's, modeling was largely conducted on a region-wide scale. In 1984, an effort was conducted to separately model travel demand in Riverside and San Bernardino Counties using a derivative of the SCAG regional model entitled "RivSan". This effort was further enhanced in 1987 through an improved version of the model.

An update of the CMP model (the terms "CTP Model" or "RivSan" are occasionally used to refer to the CMP model) was completed for the Valley and Mountain portions of the county, using 1990 Census geography, a 1990 base year, refined network and zone structures, and the regional socioeconomic data forecast for the year 2015 adopted by SCAG in 1994. An update to the year 2020 planning horizon is now in progress, and an upgrade of the model to include transit is nearing completion. Model development activities have been completed in the Victor Valley, and are in progress in the Barstow and Morongo Basin areas.

Local models which have been derived from the subregional model have been or are being developed by many of the local agencies to provide more detailed local modeling capability.

Each level of model has specific applications. Neither the SCAG regional model nor the CMP model can be detailed enough to meet all the objectives of the Land Use/Transportation Analysis Program. On the other hand, local models are not designed to address regional needs. To address both scales, consistency must be established among the modeling systems and the results they produce. A document produced by SCAG entitled "Guidelines for Modeling Consistency in Riverside and San Bernardino Counties" provides a process for assessing and maintaining consistency between local models and the CMP model, while providing the flexibility for each level of model to perform its intended function. That document is available through the CMA and should be referenced to answer many of the questions on the development and execution of models.

6.F.2 TYPES OF MODELING ACTIVITIES FOR THE CMP

A summary of the modeling activities to be conducted as part of the CMP is presented below. In addition Appendix C, guidelines for preparing TIA reports, identifies several possible approaches to the development of forecasts for the Land Use/Transportation Analysis Program.

6.F.2.1 **Annual Modeling**

- Purpose: To evaluate CIP projects on the CMP network, to evaluate policy options related to the CMP, and to provide base data for other applications by local agencies, either related to their local models or independently from their local models.
- Model: CMP model.
- Responsibility: SCAG.

- Time frame: Annually and as otherwise required for special studies. Draft forecasts to be produced by the end of March.

6.F.2.2 **Modeling for the Comprehensive Transportation Plan and Areawide Deficiency Plans**

- Purpose: Evaluate transportation system needs along corridors or within given areas.
- Model: CMP model or a local model, depending on the specific application; model with mode split capability is needed in urban areas.
- Agency(ies) responsible: Local jurisdictions, Caltrans, SCAG, and/or the CMA.
- Time frame: Follow-up to annual modeling or as needed.

6.F.2.3 **Modeling for Land Use/Transportation Analysis Program**

- Purpose: Evaluate the impacts of land use decisions on the CMP network or for other local analysis purposes. Forecasting could be associated with specific development projects, general plan updates/revisions, specific plans, and other changes in land use.
- Model: Primarily local models. The CMP model is a useful alternative for analyzing certain major facilities, large development projects or changes in proposed land use, or situations where a mode choice component is needed to evaluate the potential of transit to comprise a viable alternative to capacity projects.
- Agency responsibility: Local jurisdictions or the CMA and SCAG (Note: Development of a local model is not a condition of CMP compliance. Alternative consistent analytic methods may be used for land use/transportation analyses).
- Time frame: Project-specific.

6.G SUMMARY OF RESPONSIBILITIES

CMA Responsibilities

- Coordinate meetings of the CMP Technical Advisory Committee and its subcommittees and task forces to implement the actions defined in the CMP.
- Maintain, with SCAG, the CMP model to produce annual forecasts of the CMP system.
- In coordination with SCAG, review local models for consistency with the CMP.
- With SCAG, predict future deficiencies through the annual modeling process.
- Confirm adoption and implementation of the land use/transportation analysis program and the trip reduction and travel demand management ordinance by local agencies.

- Confirm the maintenance of level of service standards and the adequacy of deficiency plans prepared by local jurisdictions.
- Confirm the reported performance of the transit system.
- Make findings of nonconformance for local agencies not complying with provisions of the CMP.
- When applicable, review local jurisdiction findings of conformance in conjunction with other conformity information.

Local Jurisdiction Responsibilities

- Conduct traffic counts and LOS analysis on an annual basis according to the plan established in this chapter of the CMP.
- For those segments potentially identified as deficient (LOS drops below the standard), local jurisdictions may conduct travel time runs to confirm the deficiency.
- Maintain current, consistent local transportation models or utilize consistent alternative analytic methods, and utilize such models or consistent methods to analyze the impact of land use decisions, prepare congestion management master plans, and other activities related to the CMP.
- Conduct intersection turning movement counts annually on those intersections within one LOS of the standard. For other key intersections, conduct intersection turning movement counts a minimum of once every three years, except where local staff ascertain that growth rates require more frequent counts.
- Maintain the traffic count information (link and turning movement) in a set of data bases that can be easily accessed and shared with multiple agencies.
- Maintain current land use data as part of ongoing local transportation modeling activities.
- Identify when segments or intersections become deficient and prepare or participate in preparation of a deficiency plan when necessary.
- Plan for the mitigation of future deficiencies using strategies developed through the CTP process and incorporated into areawide deficiency plans and Traffic Impact Analysis Reports.
- At the discretion of local jurisdictions, governing bodies submit findings of conformance to the CMA.

CALTRANS Responsibilities

- Conduct State highway traffic counts and LOS analysis on an annual basis according to the plan established in this chapter of the CMP.
- Maintain existing State highway traffic count information (link and turning movement) in a set of data bases that can be easily accessed and shared with multiple agencies.

- With local jurisdictions, plan for the mitigation of future deficiencies on State highways through the preparation of congestion management master plans.

SCAG Responsibilities

- Maintain, with the CMA, the CMP model. Produce annual forecasts on the CMP network.

- Review local models for consistency with the CMP model and use local model data to update and improve the CMP model.

7. CAPITAL IMPROVEMENT PROGRAM ELEMENT

7.A LEGAL REQUIREMENTS

California Government Code Section 65089 (b) (5) states the requirements for the capital improvement program (CIP):

> "The program shall contain...a seven year capital improvement program, developed using the performance measures described in (the performance measures element) to determine effective projects that maintain or improve the performance of the multimodal system for the movement of people and goods, to mitigate regional transportation impacts identified pursuant to paragraph (4). The program shall conform to transportation-related vehicle emissions air quality mitigation measures, and include any project that will increase the capacity of the multimodal system. It is the intent of the Legislature that, when roadway projects are identified in the program, consideration be given to maintaining bicycle access and safety at a level comparable to that which existed prior to the improvement or alteration. The capital improvement program may also include safety, maintenance, and rehabilitation projects that do not enhance the capacity of the system but are necessary to preserve the investment in existing facilities."

Programming of certain federal transportation funds is also linked to the congestion management program by Section 65089.2(c):

> "(1) The regional agency shall not program any surface transportation funds and congestion mitigation and air quality funds pursuant to Section 182.6 and 192.7 of the Streets and Highways Code in a county unless a congestion management program has been adopted by December 31, 1992, as required pursuant to Section 65089. No surface transportation program funds or congestion mitigation and air quality funds shall be programmed for a project in a local jurisdiction that has been found to be in nonconformance with a congestion management program pursuant to Section 65089.5 unless the agency finds that the project is of regional significance."

7.B IMPLICATIONS OF CONGESTION MANAGEMENT PROGRAM CIP DEVELOPMENT AND RELATIONSHIP TO OTHER PLANS

The CIP of the CMP assembles in one document information on all the transportation-related improvements anticipated for the multimodal CMP system, regardless of funding source. Inclusion of projects in the CIP is intended to help coordinate improvements across jurisdictional boundaries, as well as to initiate the process of forwarding projects to the Regional Transportation Improvement Program (RTIP), which provides access to State and federal funding sources.

Thus, there are two components to the CIP: one which provides access to State and federal transportation funding through the RTIP process, and the other which includes a much broader spectrum of projects and funding sources for informational purposes, and in support of the air quality conformity determination for the RTIP. The latter is a compilation of CMP-related projects from the CIPs of individual local jurisdictions. Over time, these projects may be identified through the Land Use/Transportation Analysis Program (i.e.,

mitigating actions in TIA Reports), and deficiency plans. Projects funded by both public and private sources are shown.

The CMP is incorporated into the regional transportation plan action element. Therefore, potential RTIP projects contained within the CIP must be consistent with the assumptions, goals, policies, actions, and projects identified in the regional transportation plan. SCAG must review the CIP to avoid inconsistencies.

The CIP represents the county's input to the RTIP. Projects to be included in the RTIP must first be included in the CMP CIP. However, it is important to note that SCAG is responsible for assembling the RTIP, and that the RTIP is a funding constrained document. Therefore, projects included in the CMP CIP must be limited to those for which funding is found to be reasonably available.

SCAG must exercise selectivity in projects to be funded through the RTIP and will need to refer to the project prioritization information provided by the County Transportation Commission, the CMA, local jurisdictions, air districts, and Caltrans. However, all projects contained in the RTIP, including those which are to be funded locally, are included in the air quality conformity determination for the RTIP.

The merging of the CMP CIP into the RTIP is facilitated by formatting the CIP in the same manner as the RTIP. The development of the CMP (including the CIP) is timed to meet the biennial December 1 deadline for submittal of the RTIP to the California Transportation Commission. In years when an RTIP is not prepared, CIP projects may be reviewed and re-ranked if necessary.

The RTIP must conform with the State Implementation Plan (SIP), which is the State's Plan, subject to federal approval, that specifies the measures to be taken within each of the State's Air Quality Districts to attain federal air quality standards. For the CMP CIP to be adopted into the regional transportation plan, it must also conform to the SIP. Within both the South Coast and Southeast Desert air basins, the most recently approved federal SIPs date to 1999, and 1994 respectively. Until new SIPs receive federal approval, air district and State-approved air quality plans (the most recent were adopted in 1997) provide interim guidance. Projects in the CMP CIP must be consistent with acceptable strategies or improvement types provided by the SCAQMD or the MDAQMD. Projects that are not consistent with the acceptable strategies must obtain approval from the appropriate air district to be included in the CIP.

7.C OBJECTIVES, POLICIES, AND ACTIONS

Objective 7.1 Implementation - Provide a framework for the funding and implementation of improvements that will maintain or improve regional mobility and meet federal, State, and regional air quality requirements.

Policy 7.1.1 - Incorporate projects into the CIP based on use of the performance measures described in the performance measures element of the CMP, to select effective projects that maintain or improve the performance of the multimodal system for the movement of people and goods

Action Within the Comprehensive Transportation Plan (CTP), and other CMP elements, use measures from the performance measures element to select and prioritize projects or strategies for inclusion in the CMP CIP which best meet the objectives of the CTP and Regional Transportation Plan.

RESPONSIBILITY: The CMA, local jurisdictions, and Caltrans.

Policy 7.1.2 - Provide information in the CIP on project location, type, funding, implementation responsibility, and justification, consistent with the format of the RTIP.

Action Prepare the CIP in accordance with Government Code section 65089 (b) (5) and the guidelines established in this chapter.

RESPONSIBILITY: The CMA, in cooperation with local jurisdictions and Caltrans.

Policy 7.1.3 - Develop the CIP in conformance with transportation-related air quality mitigation measures.

Action Prepare the CIP in accordance with Government Code section 65089 (b) (5), the State Implementation Plan, and the respective air quality management plans, and guidelines established in this chapter.

RESPONSIBILITY: The CMA, in cooperation with local jurisdictions, the regional agency, Caltrans, and air quality districts.

7.D PROCESS OF CIP DEVELOPMENT

The process for developing the CMP CIP is as follows:

- Local governments and the County Transportation Commission identify projects or other transportation programs through local planning processes, the CTP, and other CMP elements. Capital projects to be implemented in accordance with the CTP, deficiency plans, or TIA reports must be included in the CIP. Projects to be included in the CIP should be submitted in a format that can be directly integrated into the CIP document and the RTIP. A sample page is shown in Figure 7-1. The full CIP is presented in Appendix E. It is preferable that agencies submit their lists as edited versions of the prior year's CMP CIP. Agencies should submit projects within their own CIPs that are on the CMP system or that may have an effect on traffic flow on the CMP system. Projects may include capacity increasing projects, traffic operational improvement projects, and demand reducing projects. Any funding for transportation control measure implementation must also be included in the CIP for inclusion in the RTIP to support the air quality conformity determination. Because the RTIP is required to be financially constrained, all funding sources must be identified. Projects using only local funding need not be prioritized. The CMP CIP submittal should also indicate how the need for the project was identified in relation to other elements of the CMP, including the performance measures cited in the performance measures element of the CMP. For example, if a CIP project was developed based on a TIA Report or a deficiency plan, this relationship and the basis for prioritization should be identified.
- Transit providers should identify their projects that are necessary to maintain or improve multimodal system performance, and the basis for prioritization. These projects may need to be coordinated with the local governments.
- Within the South Coast Air Quality Management District, the transportation control measures contained in the State-approved SIP and air quality management plan must be incorporated in the CMP CIP. Within the Southeast Desert Air Basin, any TCM's identified within the Air Quality Management Plan to be funded through the

RTIP must be included in the CMP CIP. The CMA will coordinate CIP development with SCAG, the SCAQMD, and the MDAQMD.

- The CMA will compile the projects submitted for the CIP, and will evaluate projects submitted for nonlocal funding, based on the data submitted by the agencies.

- The CMA will provide an early draft of the CIP to SCAG to smooth the incorporation of the CIP into the RTIP. SCAG will review the CIP and incorporate it into the RTIP.

- Because the CMP system includes State highways, Caltrans should be consulted during CIP formulation. Caltrans has specific project and cost information for State highway projects needed for CIP preparation. The CMA will work closely with Caltrans and other agencies to ensure that Project Study Reports (PSR's), TIA reports, and deficiency plans are adequately prepared. PSR's are required to be prepared before State highway projects are programmed into the State Transportation Improvement Program.

7.F SUMMARY OF RESPONSIBILITIES

CMA Responsibilities

- Work with local jurisdictions, Caltrans, transit agencies, and the air districts to identify and select CIP projects based on the objectives of the CTP and performance measures identified within the CMP.

- Develop project priorities for nonlocally funded projects based on the CTP objectives, CMP performance measures, and additional information submitted by local jurisdictions, Caltrans, and transit agencies.

Local Jurisdiction Responsibilities

- Based on the CTP and CMP performance measures, work with the CMA, Caltrans, transit agencies, and the air districts to identify CIP projects.

- Submit CIP project proposals to the CMA.

Caltrans Responsibilities

- Based on the CTP and CMP performance measures, work with the CMA, local jurisdictions, transit agencies, and the air districts to identify CIP projects.

- Submit CIP project proposals to the CMA.

Transit Agency Responsibilities

- Based on the CTP and CMP performance measures, work with the CMA, local jurisdictions, Caltrans, and the air districts to identify CIP projects.

- Submit CIP project proposals and supporting data to the CMA.

SCAQMD and MDAQMD Responsibilities

- Maintain a list of improvement types that satisfy air quality requirements.
- Review proposed CIP projects for consistency with air quality requirements and ensure consistency with State and federal law.

SANBAG RTIP Project Submittal Form
Roadway Improvement Projects

Purpose	Agencies implementing projects that require inclusion into the Regional Transportation Improvement Program/Federal Transportation Improvement Program (RTIP/FTIP).
Project Types	The agency's project is required to be in the RTIP/FTIP if it meets one or more of the following: **(1) The project is on the State Highway System regardless of funding type. (2) The project is federally funded. (3) The project is a regionally significant locally funded project. Or, (4) the local project requires any form of federal approval**.
Exception	Do not complete this form if your project is part a specific Caltrans Local Programs lump sum (e.g. HES, HBRR, etc.) Caltrans will provide SANBAG the information to submit for their lump sum projects.
Steps	1. **New and Amended Projects must complete Items 1-8 and attach a map of proposed project (preferably Thomas Bros.):** Deleted/Completed projects fill out sections 1-5. Deleted Projects need explanation for project deletion. 2. Attach a project map that shows the project location and basic project details. 3. Return this form and project map to SANBAG via fax or mail, attention Lisa Poe. 4. New project submissions or project amendments may be submitted any time to SANBAG. However, SANBAG can only be submit projects to SCAG for RTIP inclusion when the appropriate amendment cycle occurs. **: (909) 388-2002**

Section A: Project Title and Lead Agency Information

PROPOSED PROJECT: Add/Amend/Delete/Complete (Please circle) RTIP No.:	**Date Submitted:** **Contact Person:** **Phone No.**

1.	**Project Lead Agency:**
2.	**Project Title:**
3a.	**Project Limits:** (Describe cross streets and distance of project. If project is segmented, list all segments with applicable cross streets and their distances):
3b.	**Route and PM/KP for All State Highway Projects:** (Provide route and post mile or kilo post mile of improved project – list "From" and "To" limits)

Route		**PM/KP From**		**PM/KP To**	

Section B: Project Description

4.	Briefly describe the existing project and proposed improvements (Note: This section provides a general description of the project. (If adding lanes, list how many lanes exist and how many lanes to be added (i.e. Widen from 2-4 lanes – meaning 1 lane in each direction to 2 lanes in each direction) If project includes left turn lanes, or any additional improvements, please specify. *(If project is being **deleted** – please include reason why project is being deleted in this section)*

Section C: Project Completion Date and Environmental Document/Date

5. **What is the Estimated Project Completion Date:**

6. **Environmental Document Type:**
Select one of the following:

CE: Categorically Exempt	FEIR: Final Environmental Impact Report
DCE: Draft Categorically Exempt	FEIS: Final Environmental Impact Statement
DEIR: Draft Environmental Impact Report	FONSI: Finding of No Significant Impact
DEIS: Draft Environmental Impact Statement	ND: Negative Declaration
DND: Draft Negative Declaration	SE: Statutory Exempt

7. **Environmental Document Date:**
(Do not leave this item blank)

Section D: Project Funding Information

Amounts in (1000s of dollars)

8. Fund Type (i.e. CMAQ)	Year	Eng. Cost	R/W Cost	Cons. Cost	Fund Total
	2001/2002				
	2002/2003				
	2003/2004				
	2004/2005				
	2005/2006				
	2006/2007				
	2007/2008				
	Fund Totals:				
Fund Type					
(i.e. STPL)	2001/2002				
	2002/2003				
	2003/2004				
	2004/2005				
	2005/2006				
	2006/2007				
	2007/2008				
	Fund Totals:				
Fund Type					
(i.e. Meas. I)	2001/2002				
	2002/2003				
	2003/2004				
	2004/2005				
	2005/2006				
	2006/2007				
	2007/2008				
	Fund Totals:				
Project Totals:					

Authorized Signature of Submitted Project Request: _____

O:2002RTIPFORM-lep.doc

8. DEFICIENCY PLANS

This element discusses the process to be used within San Bernardino County to address transportation system deficiencies through preparation of deficiency plans. In addition to statutory requirements, policy guidance regarding deficiency plans was provided by the CMA Board of Directors in October 1994. This guidance is reflected in Policies 8.1.1, 8.1.4, and 8.1.5 of this chapter.

Statutory requirements added by the passage of AB 1963 in 1994 require CMA's to prepare and adopt procedures for deficiency plan development and implementation responsibilities. These procedures will be developed through the CMP TAC, and will be incorporated into the CMP as Appendix D upon their completion and approval by the CMA Board of Directors. The conceptual and policy framework for these procedures is described.

8.A LEGAL REQUIREMENTS

California Government Code Section 65089(b)(2)(B) states the following requirement to prepare deficiency plans:

> "... When the level of service on a segment or at an intersection fails to attain the established level of service standard, a deficiency plan shall be adopted pursuant to Section 65089.4.

Detailed CMP deficiency plan requirements are specified in Government Code Section 65089.4:

(a) A local jurisdiction shall prepare a deficiency plan when highway or roadway level of service standards are not maintained on segments or intersections of the designated system. The deficiency plan shall be adopted by the city or county at a noticed public hearing.

(b) The agency shall calculate the impacts subject to exclusion pursuant to subdivision (f) of this section, after consultation with the regional agency, the department, and the local air quality management district or air pollution control district. If the calculated traffic level of service following exclusion of these impacts is consistent with the level of service standard, the agency shall make a finding at a publicly noticed meeting that no deficiency plan is required and so notify the affected local jurisdiction.

(c) The agency shall be responsible for preparing and adopting procedures for local deficiency plan development and implementation responsibilities, consistent with the requirements of this section. The deficiency plan shall include all of the following:

(1) An analysis of the cause of the deficiency. This analysis shall include the following:

(A) Identification of the cause of the deficiency.

(B) Identification of the impacts of those local jurisdictions within the jurisdiction of the agency that contribute to the deficiency. These impacts shall be identified only if the calculated traffic level of service following exclusion of impacts pursuant to subdivision (f) indicates that the level of service standard has not been maintained, and shall be limited to impacts not subject to exclusion.

(2) A list of improvements necessary for the deficient segment or intersection to maintain the minimum level of service otherwise required and the estimated costs of the improvements.

(3) A list of improvements, programs, or actions, and estimates of costs, that will (A) measurably improve multimodal performance, using measures defined in paragraphs (1) and (2) of subdivision (b) of Section 65089, and (B) contribute to significant improvements in air quality, such as improved public transit service and facilities, improved nonmotorized transportation facilities, high occupancy vehicle facilities, parking cash-out programs, and transportation control measures. The air quality management district or air pollution control district shall establish and periodically revise a list of approved improvements, programs, and actions that meet the scope of this paragraph. If an improvement, program, or action on the approved list has not been fully implemented, it shall be deemed to contribute to significant improvements in air quality. If an improvement, program, or action is not on the approved list, it shall not be implemented unless approved by the local air quality management district or air pollution control district.

(4) An action plan, consistent with the provisions of Chapter 5 (commencing with Section 66000), that shall be implemented, consisting of improvements identified in paragraph (2), or improvements, programs, or actions identified in paragraph (3), that are found by the agency to be in the interest of the public health, safety and welfare. The action plan shall include a specific implementation schedule. The action plan shall include implementation strategies for those jurisdictions that have contributed to the cause of the deficiency in accordance with the agency's deficiency plan procedures. The action need not mitigate the impacts of any exclusions identified in subdivision (f). Action plan strategies shall identify the most effective implementation strategies for improving current and future system performance.

(d) A local jurisdiction shall forward its adopted deficiency plan to the agency within 12 months of the identification of the deficiency. The agency shall hold a noticed public hearing within 60 days of receiving the deficiency plan. Following that hearing, the agency shall either accept or reject the deficiency plan in its entirety, but the agency may not modify the deficiency plan. If the agency rejects the plan, it shall notify the local jurisdiction of the reasons for that rejection, and the local jurisdiction shall submit a revised plan within 90 days addressing the agency's concerns. Failure of a local jurisdiction to comply with the schedule and requirements of this section shall be considered to be nonconformance for the purposes of Section 65089.5.

(e) The agency shall incorporate into its deficiency plan procedures a methodology for determining if deficiency impacts are caused by more than one local jurisdiction within the boundaries of the agency.

(1) If, according to the agency's methodology, it is determined that more than one local jurisdiction is responsible for causing a deficient segment or intersection, all responsible local jurisdictions shall participate in the development of a deficiency plan to be adopted by all participating local jurisdictions.

(2) The local jurisdiction in which the deficiency occurs shall have lead responsibility for developing the deficiency plan and for coordinating with other impacting local jurisdictions. If a local jurisdiction responsible for participating in a multi-jurisdictional deficiency plan does not adopt the deficiency plan in accordance with the schedule and requirements of paragraph (a) of this section, that jurisdiction shall be considered in nonconformance with the program for purposes of Section 65089.5.

(3) The agency shall establish a conflict resolution process for addressing conflicts or disputes between local jurisdictions in meeting the multi-jurisdictional deficiency plan responsibilities of this section.

(f) The analysis of the cause of the deficiency prepared pursuant to paragraph (1) of subdivision (c) shall exclude the following:

(1) Interregional travel.

(2) Construction, rehabilitation, or maintenance of facilities that impact the system.

(3) Freeway ramp metering.

(4) Traffic signal coordination by the state or other multijurisdictional agencies.

(5) Traffic generated by the provision of low and very low income housing.

(6) (A) Traffic generated by high density residential development located within one-fourth of a mile of a fixed rail passenger station.

(B) Traffic generated by any mixed use development located within one-fourth of a mile of a fixed rail passenger station, if more than half of the land area, or floor area, of the mixed use development is used for high density housing, as determined by the agency.

(g) For the purposes of this section, the following terms have the following meanings:

(1) "High density" means residential density development which contains a minimum of 24 dwelling units per acre and a minimum density per acre which is equal to or greater than 120 percent of the maximum residential density allowed under the local general plan and zoning ordinance. A project providing a minimum of 75 dwelling units per acre shall automatically be considered high density.

(2) "Mixed use development" means development which integrates compatible commercial or retail uses, or both, with residential uses, and which, due to the proximity of job locations, shopping opportunities, and residences, will discourage new trip generation."

8.B BENEFITS AND IMPLICATIONS OF DEFICIENCY PLANS

Deficiency plans provide a mechanism for development and implementation of strategies to address inadequate system performance and avoid future problems, including identification of causes and mitigation responsibilities.

If the level of service at an intersection or a segment drops below the established level of service standard, local jurisdictions are required to develop these plans to correct the deficiency by making improvements that elevate the level of service to a condition equal to or better than the prescribed level of service standard for that intersection or segment, or by implementing strategies that will measurably improve the level of service of the system and contribute to significant improvements in air quality.

8.C OBJECTIVES, POLICIES, AND ACTIONS

The objective of deficiency plans in San Bernardino County is:

Objective 8.1 . Maintain or improve the performance of the multimodal transportation system within San Bernardino County through development and implementation of deficiency plans.

Policy 8.1.1 - Address existing and future deficiencies on all CMP facilities through Deficiency Plans which cover large geographic areas of the county (such as the Valley or Victor Valley), rather than individual facilities or individual corridors.

Action Prepare areawide deficiency plan(s) which address all CMP roads and other significant components of the multimodal transportation system through a participatory process involving all impacting and affected jurisdictions.

RESPONSIBILITY: Local jurisdictions.

Policy 8.1.2 - Establish and maintain procedures for local deficiency plan development and implementation responsibilities, consistent with statute.

Action Prepare and periodically update deficiency plan procedures, subject to approval by the CMA Board of Directors.

RESPONSIBILITY: The CMA in cooperation with local jurisdictions.

Policy 8.1.3 - Upon completion of the CTP, prepare and adopt areawide deficiency plans within one year for areas in which the CMP monitoring program has identified deficiencies.

Action Through the CTP Subarea Team for the area in which a deficiency has been identified, develop the areawide deficiency plan based one the local actions identified within the CTP as it applies to that area.

RESPONSIBILITY: Local jurisdiction(s) in which deficiency has been identified as lead agency(s), other jurisdictions within area participate in preparation, and adopt deficiency plan.

Policy 8.1.4 - Use the countywide Comprehensive Transportation Plan (CTP) to analyze causes of deficiencies and define the local jurisdiction actions to be implemented through areawide Deficiency Plans.

Action Through the CTP TAC, develop the CTP on a subarea basis to facilitate its use in defining actions to be implemented through areawide deficiency plans.

RESPONSIBILITY: The CMA, in cooperation with local jurisdictions, the regional agency, Caltrans, transit providers, and air quality districts.

Policy 8.1.5 - To the greatest extent possible, provide technical and financial support for the process of developing areawide deficiency plans from subarea components of the CTP.

Action Give priority to areawide deficiency plan preparation in allocating discretionary transportation monies.

RESPONSIBILITY: The County Transportation Commission and CMA.

Policy 8.1.6 - Incorporate into the adopted deficiency plan procedures a methodology for determining if deficiency impacts are caused by more than one local jurisdiction within the boundaries of the CMA.

Action Through the CMP TAC, develop and maintain a methodology for fairly attributing deficiency impacts and plan implementation responsibilities to all jurisdictions within a deficiency planning area which contribute to the cause of the deficiency.

RESPONSIBILITY: The CMA.

Policy 8.1.7 - Calculate the impacts subject to exclusion, and if the calculated traffic level of service following exclusion of these impacts is consistent with the level of service standard, find at a publicly noticed meeting that no deficiency plan is required, and so notify the affected local jurisdiction.

Action Through the CMP TAC, develop and maintain a methodology for calculating the traffic level of service following exclusion of impacts from sources specified in statute.

RESPONSIBILITY: The CMA, in consultation with the regional agency, Caltrans, and the appropriate air quality management district.

Policy 8.1.8 - All local jurisdictions responsible for contributing to deficiency(s) within an area shall participate in the development of the areawide deficiency plan, and shall adopt the plan.

Action Participate in development of areawide deficiency plans, and adopt final deficiency plans.

RESPONSIBILITY: Local jurisdictions, with assistance from the CMA if requested.

Policy 8.1.9 - Update deficiency plans, as needed, in conjunction with biennial updates of the CTP and CMP.

Action Through the CTP TAC and CMP TAC, participate in updates to both the CTP and deficiency plan action programs as needed to achieve the desired systemwide performance level, in light of revised estimates of growth or travel behavior.

RESPONSIBILITY: Local jurisdictions, in cooperation with the CMA, and in consultation with the regional agency, Caltrans, and the appropriate air quality management district.

Policy 8.1.10 - Establish and maintain a conflict resolution process for addressing conflicts or disputes between local jurisdictions in meeting the multi-jurisdictional deficiency plan responsibilities.

Action Implement conflict resolution procedures at the request of one or more local jurisdictions.

RESPONSIBILITY: The CMA.

8.E DEFICIENCY PLAN STRATEGY

Consistent with statute and CMA Board policy, adoption of the applicable areawide deficiency plan by each local government in that area would constitute that local government's commitment to implement actions identified by the Comprehensive Transportation Plan as being the responsibility of local governments within the respective areas. No additional Deficiency Plans would be required, in contrast to the alternative, in which facility specific, usually multi-jurisdictional deficiency plans would be required for each CMP facility if the CMP level of service standard were exceeded. The CMA's deficiency plan policy reflects a recognition of the administrative infeasibility of a facility-specific approach relying on a patchwork of overlapping, multi-jurisdictional deficiency plans. Periodic updates of the areawide deficiency plans would be required in conjunction with CMP and CTP updates to ensure that the plans continue to reflect the mobility strategy defined by the CTP, which in turn must maintain consistency with the locations, rates, and types of land use changes that occur through time. Because preparation of the CTP is supported by non-local transportation planning funds, local governments can reduce deficiency plan preparation costs by using the CTP as the basis for each deficiency plan's action plan. The effort and cost to complete the areawide Deficiency Plans leading to adoption by local governments will depend on the nature of the transportation strategy adopted through the CTP, but will be far less than if numerous facility-specific Deficiency Plans were required under the previous deficiency plan strategy.

8.F COMPONENTS OF DEFICIENCY PLANS

Government Code Section 65089.4© specifies the components of an approvable deficiency plan. The CMA is required to calculate the impacts subject to exclusion prior to inception of the process of preparing a deficiency plan, to determine if the calculated level of service following exclusion is consistent with the level of service standard. If the calculated level of service following subtraction of the impacts subject to exclusion remains below the CMP level of service standard, the deficiency plan is required. It is required to include:

1. *Analysis of the cause of the deficiency.* Although this component of a deficiency plan may have been originally intended to identify specific land use decisions that caused a particular roadway to exceed the level of service standard, experience in the larger urbanized areas of Southern California indicates that

most deficiencies are a result of many local actions involving a multitude of local jurisdictions. In the case of a program which focuses on multi-jurisdictional, areawide deficiency plans, this element of the deficiency plan instead serves to identify the jurisdictions required to participate in and contribute to preparation and implementation of the deficiency plan.

2. List of improvements needed to maintain LOS standard. This element identifies the capital improvements or other strategies which, if implemented, would return the CMP facilities addressed by a deficiency plan to the CMP LOS standard. If a series of phased improvements would be needed through time to maintain the LOS standard because of continuing growth, all the improvements, along with a schedule which phases the improvements in relation to rates of development, could be incorporated within a single deficiency plan. This could avoid the need for preparation of numerous deficiency plans to address a single continuing problem. In the case of an areawide deficiency plan, any improvements needed to maintain the LOS standard on every facility in the area encompassed by the deficiency plan must be identified.

3. A list of improvements or strategies that will improve system performance and air quality. This element provides flexibility to move beyond (but not necessarily ignore) facility-specific, roadway level of service maintenance, to focus instead on multimodal transportation system performance throughout the entire area of interest. Instead of concentration solely on one or more facilities in relation to the CMP level of service standard, this approach also permits local policy to dictate the level of system performance (or performance improvement) to be achieved through implementation of the deficiency plan. According to CMA Board policy, the Comprehensive Transportation Plan is the mechanism through which the actions to be implemented through areawide deficiency plans are to be defined. The system performance objectives of the CTP then become the system performance level to be achieved in the respective areas addressed by deficiency plans. In effect, the deficiency plans are the implementation mechanisms for local government actions in accordance with the Comprehensive Transportation Plan.

4. An action plan based either on strategy (2) or strategy (3) above, that shall be implemented, including a specific implementation schedule. The scheduling or phasing of implementation is this section's key component. The deficiency plan's implementation schedule for long-term strategies should be based on monitored increases in land use or actual traffic, rather than on absolute dates.

Under the areawide deficiency plan strategy of the CMP for San Bernardino County, much of the effort of deficiency plan preparation and implementation is accomplished through other planning efforts or other elements of the CMP. The improvements to be implemented through the deficiency plan are to be identified for each subarea of the county through the Comprehensive Transportation Plan. The Land Use/ Transportation Analysis element of the CMP described in Chapter 4, and the CMP monitoring program described in Chapter 7, are designed to support the deficiency plan process by tracking changes in land use that affect traffic locations, volumes, and modes to determine how actual population, housing, jobs, and traffic growth is varying from the growth assumptions on which the CTP was based. As disparities are identified between actual events identified by the monitoring program, and the forecasts of growth, biennial updates of the CTP will include tests of the original transportation strategy to determine if transportation performance objectives are met despite changes in growth patterns or rates, and refinements to the CTP will be needed. Accordingly, deficiency plan

updates will be undertaken as part of the biennial CMP update process to incorporate these refinements.

8.G SUMMARY OF RESPONSIBILITIES

CMA Responsibilities

- In cooperation with member jurisdictions, the regional agency, Caltrans, transit providers, and air quality districts, develop the CTP on a subarea basis to facilitate its use in defining actions to be implemented through areawide deficiency plans.
- Coordinate periodic updates to the CTP to serve as a basis for periodic updates or revisions to deficiency plan action programs.
- In cooperation with the local jurisdictions and Caltrans, prepare and periodically update deficiency plan procedures.
- Give priority to areawide deficiency plan preparation in allocating discretionary transportation monies.
- Through the CMP TAC, develop and maintain a methodology for fairly attributing deficiency impacts and plan implementation responsibilities to all jurisdictions within a deficiency planning area which contribute to the cause of the deficiency.
- In consultation with the CMP TAC, the regional agency, Caltrans, and the air quality management districts, develop and maintain a methodology for calculating the traffic level of service following exclusion of impacts from sources specified in statute.

Local Jurisdiction Responsibilities

- Through the CMP TAC, participate in preparation and periodic updating of deficiency plan procedures.
- Prepare areawide deficiency plan(s) which address all CMP roads and other significant components of the multimodal transportation system through a participatory process involving all impacting and affected jurisdictions.
- Participate in development of the areawide deficiency plan based on the local actions identified within the pertinent subarea plan of the CTP.
- Act as lead agency to coordinate preparation of a multi-jurisdictional deficiency plan if the deficiency has been identified within your jurisdictional boundaries.
- Participate in updates to both the CTP and deficiency plan action programs as needed to achieve the desired systemwide performance level, in light of revised estimates of growth or travel behavior.

CALTRANS Responsibilities

- Participate in preparation of the CTP to define local actions to be implemented through areawide deficiency plans, and in periodic updates of the CTP.

- Participate in preparation and periodic updates to deficiency plan procedures.

- Participate through the CMP TAC in development and maintenance of a methodology for fairly attributing deficiency impacts and plan implementation responsibilities to all jurisdictions within a deficiency planning area which contribute to the cause of the deficiency.

- Participate in development and maintenance of a methodology for calculating the traffic level of service following exclusion of impacts from sources specified in statute.

- Assist local jurisdictions in preparing areawide deficiency plans as they relate to or impact the system of State highways.

Air District Responsibilities

- Establish and periodically revise a list of approved improvements, programs, and actions that it deems will contribute to significant improvements in air quality.

- Assist local governments within the respective air quality district jurisdictions to determine if areawide deficiency plans will contribute to significant improvements in air quality.

SCAG Responsibilities

- In cooperation with the CMA and local jurisdictions, prepare and update growth forecasts on which to base the CTP, deficiency plan action programs, and their periodic updates.

- In cooperation with CMA, local jurisdictions, Caltrans, transit providers, and air quality districts, participate in development of the CTP on a subarea basis to facilitate its use in defining actions to be implemented through areawide deficiency plans.

- Consult with CMA, Caltrans, and the air quality management districts, on development and maintenance of a methodology for calculating the traffic level of service following exclusion of impacts from sources specified in statute.

APPENDIX A

LEVEL OF SERVICE ANALYSIS PROCEDURES

APPENDIX A
LEVEL OF SERVICE ANALYSIS PROCEDURES

INTRODUCTION

This appendix provides an overview of the techniques used for the evaluation of the CMP network level of service, the application of these procedures, and related database management tools. The CMP level of service results for 2001 are also presented in this appendix.

CMP LEVEL OF SERVICE ANALYSIS PROCEDURES AND RESULTS

The current technical guide for the evaluation of roadway level of service (LOS) is the 2000 Highway Capacity Manual (HCM). The 2000 HCM defines the level of service criteria for various roadway elements and provides computational methods for estimating LOS. The criteria used to evaluate LOS vary based on the type of roadway and whether the traffic flow is considered interrupted or uninterrupted. Interrupted flow analysis includes the evaluation of these items:

- Signalized intersections
- Urban and suburban arterials

Uninterrupted flow analysis includes the evaluation of these items:

- Freeways
- Rural and suburban multilane highways
- Rural two-lane highways

Each of these roadway types is contained within the San Bernardino County CMP network. The LOS analysis procedure used for each roadway type, data collection techniques, and assumptions made in determining the LOS are provided below in sufficient detail that the procedures can be replicated for future CMP updates. The Highway Capacity Manual should be consulted for additional details.

Signalized Intersections

The operational analysis procedures for signalized intersections contained in the 2000 HCM were applied to "key intersections" (see definition in the Glossary) on the CMP network. There are approximately 400 key intersections on the CMP network, of which approximately 200 are local and 220 are state-controlled. Of these, approximately 50% were analyzed for the 2001 CMP.

Traffic volume turning movement data were obtained from several sources: recent counts conducted by cities in San Bernardino County, counts documented in consultant reports, and original counts conducted for the CMP. New counts were conducted between the hours of 7 and 9 AM and 4 and 6 PM. Counts conducted for CMP analysis are generally expected to be conducted for a minimum of two hours, bracketing the peak-hour.

The capacity analysis was performed using various computer programs compatible with the Federal Highway Capacity Manual, assuming signal timing with minimum phase times of ten seconds and arrival type 3. This minimum phase

time includes the green time and change interval. This latter assumption was required because most signals are demand actuated and actual signal timing information was unavailable. Variations for some intersections (phasing, saturation flow rate, controller type, and cycle length) and special intersection and traffic characteristics were used based on input provided by the local jurisdictions. Saturation flow rates of 1,800 vehicles per hour of green (vphg) for each through lane, 1,800 vphg for each exclusive right-turn lane (recent analysis of saturation flow rates suggests that 1,600 vphg would be more appropriate for the future analysis of exclusive right-turn lanes), 1,700 vphg for one exclusive left-turn lane, and 3,200 vphg for two exclusive left-turn lanes were assumed. A two-second lost time per phase and 2-3 percent heavy vehicles are also used as defaults if field data are not available.

The above saturation flow rates are the adjusted (field) saturation flow rates, and in no case shall the ideal saturation flows be allowed to go lower than the specified adjusted saturation flows under normal conditions when field data is not available. However, there shall be no restriction on minimum saturation flow rates if actual saturation flow rates are available.

Both capacity and level of service must be fully considered to evaluate the overall operation of a signalized intersection. Capacity analysis results in the determination of V/C ratios for individual movements and also an average V/C for the entire intersection. Level of service is based on the average stopped delay per vehicle for all the movements within the intersection. For any given V/C ratio, a range of delay values may result, because the V/C ratio does not consider signal timing factors. For this reason both the V/C ratio and vehicle delay must be carefully examined.

Any V/C ratio of 1.0 or greater is an indication of actual or potential breakdown, representing little available capacity in the critical movements to absorb demand increases, thereby requiring improvements in the overall geometrics and signal operations. Therefore, an intersection must be designated as F when the V/C of the critical movements is equal to or greater than 1.0.

The summary measure provided by use of the 2000 HCM procedures for signalized intersections is the LOS by intersection for the entire intersection. This information is provided in Table A-1 for the key intersections representing 2001 conditions.

Updates of the CMP analysis for signalized intersections should also be based on the most current operational analysis procedures presented in the HCM. Actual signal timing data, peak-hour volumes, and percent of trucks should be used when available.

Urban and Suburban Arterials

The 200 signalized intersections evaluated using the 2000 HCM procedures represent only a small portion of the total number of signalized intersections on the CMP network. Most of the remaining signals are located at intersections with lower functional class roadways. A procedure is available to evaluate the level of service on the roadway segments between key intersections which included the impact of intermediate traffic signals.

The basis of the recommended procedures for the analysis of urban and suburban arterials was the procedure described in the 2000 HCM Chapters 20 & 21. The application of these procedures was simplified based on a procedure originally adopted in 1986 for use by the Florida Department of Transportation (FDOT), and which has subsequently been updated to reflect more recent data and localized conditions. The original procedure is documented in the report Florida Highway System Plan, Level of Service Procedures and Guidelines Manual. Using the

procedures described in Chapters 20 & 21 of the 2000 HCM, this methodology presents threshold hourly volumes for estimating the peak-hour peak direction level of service as a function of roadway type, urban area population, and the number of traffic signals per mile. The procedure also provides the generalized assumptions used to establish the threshold volumes. This information is provided in Tables A-2 and A-3.

The roadway segments were defined as roadway segments between CMP intersections. In most cases segment length was scaled from street maps. The number of signals on each segment was determined by reviewing the videotapes and by field review. The number of through-traffic lanes on each segment was taken from the RivSan (CMP) subregional traffic forecasting model, supplemented by field review.

Peak-hour traffic volume on the segments was determined based on the intersection data collected for CMP intersections in combination with segment volume data provided by local jurisdictions and Caltrans. The intersection exiting and entering volumes from the opposite ends of the segment were averaged to determine the directional segment volume. The highest directional volume was selected for both the AM and PM peak-hours to determine the level of service. The entire CMP network consists of approximately 400 arterial segments.

The summary measure generated by this analysis was the LOS by roadway segment for each of the urban and suburban arterials in the CMP network. This information is provided in Table A-4 for the CMP network representing the 1995 conditions for the peak-hour peak direction of travel.

Freeways

The 2000 HCM procedure for basic freeway segments was applied to the CMP freeway segments. However, these procedures were modified for application of the CMP network based on the updated speed/flow curves and capacity information contained in the new materials for rural multilane highways.

The summary measure generated by this analysis was the LOS for basic freeway segments for the peak-hour as shown in Table A-5. This analysis ignores the effects of weaving sections and ramp junctions but provides a reasonable general level of service estimate. Peak-hour directional mainline volumes were determined between each interchange from Caltrans data. Any count data from prior years were factored to the current year. The following assumptions were made for freeways:

- Capacity of 2,200 passenger cars per hour per lane.
- Peak-hour factor of up to .98 used for urban freeways (due to high levels of congestion); .90 to .92 was used for less congested areas.
- 5% heavy vehicles (trucks, RV's, and buses).
- 4% annual growth factor, based on San Bernardino County data.
- Directional distribution of 55/45.
- Peak-hour volumes were taken from the Caltrans Traffic Volumes on California State Highways, and were used as the PM peak-hour. These volumes are bidirectional.
- AM peak-hour mainline volume was taken to be 90% of the PM peak-hour.
- Design speed of 70 mph.

Rural Multilane Highways

The LOS analysis for the CMP network rural multilane arterials was conducted using the materials for the new Chapter 21 of the HCM. Roadway segments were identified based on the traffic volume, grade, and roadway characteristics of each segment. Traffic volume and roadway segment data were available from Caltrans.

The results of the LOS analysis are summarized in Table A-6.

Rural Two-Lane Highways

The LOS analysis for rural two-lane highways was conducted using the procedures contained in Chapter 20 of the 2000 HCM. Roadway segments were defined based on the traffic volume and roadway characteristics. Peak-hour traffic volume was estimated for each roadway segment based on Caltrans data.

The results of the LOS analysis for rural two-lane segments are provided in Table A-6.

TABLE A-1
SAN BERNARDINO COUNTY CMP INTERSECTION LEVEL OF SERVICE

MONITORING AGENCY	NS	EW	JURISDICTION (CITY or COUNTY)	YEAR	CONTROL TYPE	AM PK HOUR DELAY SEC	AM PK HOUR V/C	AM PK HOUR LOS	PM PEAK HR DELAY SEC	PM PEAK HR V/C	PM PEAK HR LOS
ADELANTO	ALL STATE HIGHWAYS/SEE CALTRANS										
APPLE VALLEY	APPLE VALLEY RD*	BEAR VALLEY RD*	APPLE VALLEY	2001	SIG	49	1.0^	F**	18	0.76	C
				2000	SIG	21	0.73	C	24	0.86	C
BARSTOW	EASTGATE/COOLWTR.	MAIN ST.*	BARSTOW	2001	SIG			NPH	12	0.51	B
				2000	SIG			NPH	12	0.51	B
	BARSTOW RD*	MAIN ST.*	BARSTOW	2001	SIG						
				2000	SIG			NPH	7	0.60	B
								NPH	7	0.60	B
	BARSTOW RD*	VIGINIA WAY	BARSTOW	2001	SIG			NPH	16	0.67	C
				2000	SIG			NPH	16	0.67	C
	1ST	MAIN ST*	BARSTOW	2001	SIG			NPH	18	0.53	C
				2000	SIG			NPH	18	0.53	C
	BARSTOW RD*	MOUNTAIN VIEW	BARSTOW	2001	SIG			NPH	13	0.46	B
				2000	SIG			NPH	13	0.46	B
BIG BEAR	ALL STATE HIGHWAYS/	SEE CALTRANS									
CALTRANS	ALABAMA	I-10 (EB)*	REDLANDS	2001	SIG			DNS			DNS
Note: Monitoring by				2000	SIG			DNS			DNS
Others	ALABAMA*	I-10 (WB)*	REDLANDS	2001	SIG			DNS			DNS
				2000	SIG			DNS			DNS
	ALDER*	FOOTHILL (SR-66)*	FONTANA	2001	SIG			DNS			DNS
				2000	SIG			DNS			DNS
	AMARGOSA	PALMDALE (SR-18)*	VICTORVILLE	2001	SIG			DNS			DNS
				2000	SIG			DNS			DNS
	APPLE VALLEY RD*	SR-18*	APPLE VALLEY	2001	SIG			DNS			DNS
				2000	SIG			DNS			DNS
	APPLE VALLEY INN RD.	SR-18	APPLE VALLEY	2001	SIG						DNS
				2000	SIG			DNS	5	0.49	C
	ARCHIBALD*	19TH ST (SR-30)*	R. CUCAMONGA	2001	SIG			DNS			DNS
				2000	SIG			DNS			DNS
	ARCHIBALD*	FOOTHILL (SR-66)*	R. CUCAMONGA	2001	SIG	100^	1.09	F	1.09	1.22	F
				2000	SIG			DNS			DNS
	ARCHIBALD*	I-10 (EB)*	ONTARIO	2001	SIG			DNS			DNS
				2000	SIG			DNS			DNS
	ARCHIBALD*	I-10 (WB)*	ONTARIO	2001	SIG			DNS			DNS
				2000	SIG			DNS			DNS

TABLE A-1
SAN BERNARDINO COUNTY CMP INTERSECTION LEVEL OF SERVICE

MONITORING AGENCY	NS	EW	JURISDICTION (CITY or COUNTY)	YEAR	CONTROL TYPE	AM PK HOUR DELAY SEC	AM PK HOUR V/C	AM PK HOUR LOS	PM PEAK HR DELAY SEC	PM PEAK HR V/C	PM PEAK HR LOS
CALTRANS cont'd	ARCHIBALD*	SR-60 (EB)*	ONTARIO	2001	SIG			DNS			DNS
Note: Monitoring by				2000	SIG			DNS			DNS
Others											
	ARCHIBALD*	SR-60 (WB)*	ONTARIO	2001	SIG			DNS			DNS
				2000	SIG			DNS			DNS
	BARSTOW RD(SR-247)*	I-15 (EB)*	BARSTOW	2001	SIG			DNS			DNS
				2000	SIG			DNS			DNS
	BARSTOW RD(SR-247)*	I-15 (WB)*	BARSTOW	2001	SIG			DNS			DNS
				2000	SIG			DNS			DNS
	BARSTOW RD(SR-247)*	MAIN*	BARSTOW	2001	SIG			DNS			DNS
				2000	SIG			DNS			DNS
	BENSON	16TH ST. (SR-30)*	UPLAND	2001	SIG			DNS			DNS
				2000	SIG			DNS			DNS
	BENSON	FOOTHILL (SR-66)	UPLAND/S. B. CO.	2001	SIG	3.5	0.96	D	3.5	0.93	D
				2000	SIG	3.5	0.96	D	3.5	0.93	D
	I-210*	3RD ST.	HIGHLAND	2001	SIG			DNS			DNS
				2000	SIG			DNS			DNS
	I-210*	BASE LINE	HIGHLAND	2001	SIG			DNS			DNS
				2000	SIG			DNS			DNS
	I-210*	HIGHLAND	HIGHLAND	2001	SIG			DNS	18	0.84	C
				2000	SIG			DNS			DNS
	BRYANT*	MILL CRK RD (SR-38)*	YUCAIPA	2001	1W STOP			DNS			DNS
				2000	1W STOP			DNS			DNS
	CALIFORNIA*	I-10 (EB)*	REDLANDS	2001	SIG			DNS			DNS
				2000	SIG			DNS			DNS
	CALIFORNIA*	I-10 (WB)*	REDLANDS	2001	SIG			DNS			DNS
				2000	SIG			DNS			DNS
	CAMPUS	FOOTHILL (SR-66)*	UPLAND	2001	SIG			DNS			DNS
				2000	SIG			DNS			DNS
	CARNELIAN	19TH ST*(SR-30)	R. CUCAMONGA	2001	SIG			DNS			DNS
				2000	SIG			DNS			DNS
	CEDAR (AYALA)	HIGHLAND (SR-30)*	RIALTO	2001	SIG			DNS			DNS
				2000	SIG			DNS			DNS
	CEDAR*	FOOTHILL (SR-66)*	RIALTO	2001	SIG			DNS			DNS
				2000	SIG			DNS			DNS

TABLE A-1
SAN BERNARDINO COUNTY CMP INTERSECTION LEVEL OF SERVICE

MONITORING AGENCY	NS	EW	JURISDICTION (CITY or COUNTY)	YEAR	CONTROL TYPE	AM PK HOUR DELAY SEC	AM PK HOUR V/C	AM PK HOUR LOS	PM PEAK HR DELAY SEC	PM PEAK HR V/C	PM PEAK HR LOS
CALTRANS cont'd	CEDAR*	I-10 (EB)*	BLOOMINGTON	2001	SIG	40.0	0.84	E	48.8	1.10	F**
Note: Monitoring by				2000	SIG	40.0	0.84	E	48.8	1.10	F**
Others											
	CEDAR*	I-10 (WB)*	BLOOMINGTON	2001	SIG	50.4	0.96	E	34.5	1.24	F**
				2000	SIG	50.4	0.96	E	34.5	1.24	F**
	CENTRAL*	FOOTHILL (SR-66)*	UPLAND/SB COUNTY	2001	SIG	56	0.73	E	62	0.95	F
				2000	SIG	56	0.73	E	62	0.95	F
	CENTRAL*	I-10 (EB)*	MONTCLAIR	2001	SIG	9.9	0.57	B	12.5	0.81	B
				2000	SIG	9.9	0.57	B	12.5	0.81	B
	CENTRAL*	I-10 (WB)*	MONTCLAIR	2001	SIG	12.4	0.46	B	12.3	0.78	B
				2000	SIG	12.4	0.46	B	12.3	0.78	B
	CENTRAL*	SR-60 (EB)*	CHINO	2001	SIG	11.4	0.73	B	35.8	1.06	F**
				2000	SIG	11.4	0.73	B	35.8	1.06	F**
	CENTRAL*	SR-60 (WB)*	CHINO	2001	SIG	13.9	0.62	B	24.4	0.93	C
				2000	SIG	13.9	0.62	B	24.4	0.93	C
	CHERRY*	FOOTHILL (SR-66)*	FONTANA	2001	SIG			DNS			DNS
				2000	SIG			DNS			DNS
	CHERRY*	HIGHLAND (SR-30)*	FONTANA	2001	SIG			DNS			DNS
				2000	SIG			DNS			DNS
	CHERRY*	I-10 (EB)*	FONTANA	2001	SIG	83	0.93	F	147	1.18	F
				2000	SIG	83	0.93	F	147	1.18	F
	CHERRY*	I-10 (WB)*	FONTANA	2001	SIG	37	0.91	DNS	19	0.76	C
				2000	SIG	37	0.91	DNS	19	0.76	C
	CHINO HILLS PKWY	CARBON CN (SR142)*	CHINO HILLS	2001	SIG			DNS			DNS
				2000	SIG			DNS			DNS
	CITRUS*	FOOTHILL (SR-66)*	FONTANA	2001	SIG			DNS			DNS
				2000	SIG			DNS			DNS
	CITRUS*	HIGHLAND (SR-30)*	FONTANA	2001	SIG			DNS			DNS
				2000	SIG			DNS			DNS
	CITRUS*	I-10 (EB)	SB COUNTY	2001	SIG	17.5	0.85	C	61	1.11	F
				2000	SIG	17.5	0.85	C	61	1.11	F
	CITRUS*	I-10 (WB)	SB COUNTY	2001	SIG	16.9	0.83	C	59.6	0.81	E
				2000	SIG	16.9	0.83	C	59.6	0.81	E
	D ST (SR-18)*	7TH ST	VICTORVILLE	2001	SIG			DNS			DNS
				2000	SIG			DNS			DNS

TABLE A-1
SAN BERNARDINO COUNTY CMP INTERSECTION LEVEL OF SERVICE

MONITORING AGENCY	NS	EW	JURISDICTION (CITY or COUNTY)	YEAR	CONTROL TYPE	AM PK HOUR DELAY SEC	AM PK HOUR V/C	AM PK HOUR LOS	PM PEAK HR DELAY SEC	PM PEAK HR V/C	PM PEAK HR LOS
CALTRANS cont'd	DEL ROSA DR*	SR-30 (EB)*	S. BERNARDINO	2001	SIG			DNS			DNS
Note: Monitoring by Others				2000	SIG			DNS			DNS
	DEL ROSA DR*	SR-30 (WB)*	S. BERNARDINO	2001	SIG			DNS			DNS
				2000	SIG			DNS			DNS
	E STREET*	SR-259 (EB)*	S. BERNARDINO	2001	SIG			DNS			DNS
				2000	SIG			DNS			DNS
	ETIWANDA	FOOTHILL (SR-66)*	R. CUCAMONGA	2001	SIG	17.5	0.43	C	20	0.60	C
				2000	SIG	17.5	0.43	C	20	0.60	C
	ETIWANDA*	I-10 (EB)*	ONTARIO	2001	1W STOP			DNS			DNS
				2000	1W STOP			DNS			DNS
	ETIWANDA*	I-10 (WB)*	ONTARIO	2001	1W STOP			DNS			DNS
				2000	1W STOP			DNS			DNS
	EUCLID (SR-83)*	16TH ST*	UPLAND	2001	SIG			DNS			DNS
				2000	SIG			DNS			DNS
	EUCLID (SR-83)*	19TH ST*	UPLAND	2001	SIG			DNS			DNS
				2000	SIG			DNS			DNS
	EUCLID (SR-83)*	4TH ST	ONTARIO	2001	SIG			DNS			DNS
				2000	SIG			DNS			DNS
	EUCLID (SR-83)*	7TH ST	UPLAND	2001	SIG			DNS			DNS
				2000	SIG			DNS			DNS
	EUCLID (SR-83)*	ARROW HWY	UPLAND	2001	SIG			DNS			DNS
				2000	SIG			DNS			DNS
	EUCLID (SR-83)*	EDISON*	CHINO	2001	SIG			DNS			DNS
				2000	SIG			DNS			DNS
	EUCLID (SR-83)*	FOOTHILL (SR-66)*	UPLAND	2001	SIG			DNS			DNS
				2000	SIG			DNS			DNS
	EUCLID (SR-83)*	HOLT*	ONTARIO	2001	SIG			DNS			DNS
				2000	SIG			DNS			DNS
	EUCLID (SR-83)*	I-10 (EB)*	ONTARIO	2001	SIG			DNS			DNS
				2000	SIG			DNS			DNS
	EUCLID (SR-83)*	I-10 (WB)*	UPLAND	2001	1W STOP			DNS			DNS
				2000	1W STOP			DNS			DNS
	EUCLID (SR-83)*	MISSION*	ONTARIO	2001	SIG			DNS			DNS
				2000	SIG			DNS			DNS
	EUCLID (SR-83)*	RIVERSIDE*	ONTARIO	2001	SIG			DNS			DNS
				2000	SIG			DNS			DNS

TABLE A-1
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MONITORING AGENCY	NS	EW	JURISDICTION (CITY or COUNTY)	YEAR	CONTROL TYPE	AM PK HOUR DELAY SEC	AM PK HOUR V/C	AM PK HOUR LOS	PM PEAK HR DELAY SEC	PM PEAK HR V/C	PM PEAK HR LOS
CALTRANS cont'd	EUCLID (SR-83)*	SR-60 (EB)*	ONTARIO	2001	SIG			DNS			DNS
Note: Monitoring by				2000	SIG			DNS			DNS
Others											
	EUCLID (SR-83)*	SR-60 (WB)*	ONTARIO	2001	SIG			DNS			DNS
				2000	SIG			DNS			DNS
	EUCLID (SR-83)*	SR-71*	COUNTY	2001	SIG			DNS			DNS
				2000	SIG			DNS			DNS
	EUCLID (SR-83)*	WALNUT*	ONTARIO	2001	SIG			DNS			DNS
				2000	SIG			DNS			DNS
	FT IRWIN RD*	SR-58 (NORTH)*	BARSTOW	2001	1W STOP			DNS			DNS
				2000	1W STOP			DNS			DNS
	FT IRWIN RD*	SR-58 (SOUTH)*	BARSTOW	2001	4W STOP			DNS			DNS
				2000	4W STOP			DNS			DNS
	GARNET (GRNSPOT RD)*	SR-38 (MILL CRK RD)*	COUNTY	2001	1W STOP			DNS			DNS
				2000	1W STOP			DNS			DNS
	GREENWAY DR (N)*	SR-38 (NORTH)	BIG BEAR CITY	2001	1W STOP			DNS			DNS
				2000	1W STOP			DNS			DNS
	GREENWAY DR (S)*	SR-18 (SOUTH)	BIG BEAR CITY	2001	SIG			DNS			DNS
				2000	SIG			DNS			DNS
	GROVE	FOOTHILL (SR-66)*	R. CUCAMONGA/UPLAND	2001	SIG			DNS			DNS
				2000	SIG			DNS			DNS
	GROVE	SR-60 (EB)*	ONTARIO	2001	1W STOP			DNS			DNS
				2000	1W STOP						
								DNS			DNS
	GROVE	SR-60 (WB)*	ONTARIO	2001	1W STOP			DNS			DNS
				2000	1W STOP						
								DNS			DNS
	H ST.*	5TH ST. (SR-66)*	SAN BERNARDINO	2001	SIG			DNS			DNS
				2000	SIG						
								DNS			DNS
	HAVEN*	19TH ST (SR-30)*	R. CUCAMONGA	2001	SIG			DNS			DNS
				2000	SIG						
	HAVEN*	FOOTHILL (SR-66)*	R. CUCAMONGA	2001	SIG			DNS			DNS
				2000	SIG			DNS			DNS
	HAVEN*	HIGHLAND (SR-30)*	R. CUCAMONGA	2001	SIG			DNS			DNS
				2000	SIG			DNS			DNS
	HAVEN*	I-10 (EB)*	ONTARIO	2001	3W STOP			DNS			DNS
				2000	3W STOP			DNS			DNS
	HAVEN*	I-10 (WB)*	ONTARIO	2001	3W STOP			DNS			DNS
				2000	3W STOP			DNS			DNS

TABLE A-1
SAN BERNARDINO COUNTY CMP INTERSECTION LEVEL OF SERVICE

MONITORING AGENCY	NS	EW	JURISDICTION (CITY or COUNTY)	YEAR	CONTROL TYPE	AM PK HOUR DELAY SEC	AM PK HOUR V/C	AM PK HOUR LOS	PM PEAK HR DELAY SEC	PM PEAK HR V/C	PM PEAK HR LOS
CALTRANS cont'd	HESPERIA*	D ST (SR-18)*	VICTORVILLE	2001	SIG			DNS			DNS
Note: Monitoring by				2000	SIG			DNS			DNS
Others											
	I-10*	4TH (S.BERDINO)(EB)*	ONTARIO	2001	SIG			DNS			DNS
				2000	SIG			DNS			DNS
	I-10*	4TH (S.BERDINO)(WB)*	ONTARIO	2001	SIG			DNS			DNS
				2000	SIG			DNS			DNS
	I-10*	AVE F (WB)*	YUCAIPA	2001	2W STOP			DNS			DNS
				2000	2W STOP			DNS			DNS
	I-10*	CITRUS(BRKSIDE)(EB)*	REDLANDS	2001	1W STOP			DNS			DNS
				2000	1W STOP			DNS			DNS
	I-10*	CITRUS(BRKSIDE)(WB)*	REDLANDS	2001	1W STOP			DNS			DNS
				2000	1W STOP			DNS			DNS
	I-10*	COUNTY LINE (EB)*	YUCAIPA	2001	1W STOP			DNS			DNS
				2000	1W STOP			DNS			DNS
	I-10*	COUNTY LINE (WB)*	YUCAIPA	2001	1W STOP			DNS			DNS
				2000	1W STOP			DNS			DNS
	I-10*	LIVE OAK CYN (EB)*	YUCAIPA	2001	1W STOP			DNS			DNS
				2000	1W STOP			DNS			DNS
	I-10*	YUCAIPA (EB)*	YUCAIPA	2001	SIG			DNS			DNS
				2000	SIG			DNS			DNS
	I-10*	YUCAIPA (WB)*	YUCAIPA	2001	SIG			DNS			DNS
				2000	SIG			DNS			DNS
	I-15*	4TH (S.BERDINO)(NB)*	ONTARIO	2001	SIG			DNS			DNS
				2000	SIG			DNS			DNS
	I-15*	4TH (S.BERDINO)(SB)*	ONTARIO	2001	SIG			DNS			DNS
				2000	SIG			DNS			DNS
	I-15*	BASE LINE (NB)*	R. CUCAMONGA	2001	1W STOP			DNS			DNS
				2000	1W STOP			DNS			DNS
	I-15*	BASE LINE (SB)*	R. CUCAMONGA	2001	1W STOP			DNS			DNS
				2000	1W STOP			DNS			DNS
	I-15*	BEAR VALLEY (NB)*	VICTORVILLE	2001	SIG			DNS			DNS
				2000	SIG			DNS			DNS
	I-15*	BEAR VALLEY (SB)*	VICTORVILLE	2001	SIG			DNS			DNS
				2000	SIG			DNS			DNS

TABLE A-1
SAN BERNARDINO COUNTY CMP INTERSECTION LEVEL OF SERVICE

MONITORING AGENCY	NS	EW	JURISDICTION (CITY or COUNTY)	YEAR	CONTROL TYPE	AM PK HOUR DELAY SEC	AM PK HOUR V/C	AM PK HOUR LOS	PM PEAK HR DELAY SEC	PM PEAK HR V/C	PM PEAK HR LOS
CALTRANS cont'd	I-15*	E. MAIN (EB)*	BARSTOW	2001	SIG			DNS			DNS
Note: Monitoring by				2000	SIG			DNS			DNS
Others											
	I-15*	E. MAIN (WB)*	BARSTOW	2001	SIG			DNS			DNS
				2000	SIG			DNS			DNS
	I-15*	FOOTHILL(SR-66)(NB)*	R. CUCAMONGA	2001	SIG			DNS			DNS
				2000	SIG			DNS			DNS
	I-15*	FOOTHILL(SR-66)(SB)*	R. CUCAMONGA	2001	1W STOP			DNS			DNS
				2000	1W STOP			DNS			DNS
	I-15*	JURUPA (NB)*	ONTARIO	2001	1W STOP			DNS			DNS
				2000	1W STOP			DNS			DNS
	I-15*	JURUPA (SB)*	ONTARIO	2001	1W STOP			DNS			DNS
				2000	1W STOP			DNS			DNS
	I-15*	MAIN (NB)*	HESPERIA	2001	1W STOP			DNS			DNS
				2000	1W STOP			DNS			DNS
	I-15*	MAIN (SB)*	HESPERIA	2001	1W STOP			DNS			DNS
				2000	1W STOP			DNS			DNS
	I-15*	MARIPOSA	VICTORVILLE	2001	1W STOP			DNS			DNS
				2000	1W STOP			DNS			DNS
	I-15*	PALMDALE (SR-18)(SB)*	VICTORVILLE	2001	1W STOP			DNS			DNS
				2000	1W STOP			DNS			DNS
	I-15*	SR-18 (NB)*	VICTORVILLE	2001	1W STOP			DNS			DNS
				2000	1W STOP			DNS			DNS
	I-15*	SR-18 (SB)*	VICTORVILLE	2001	1W STOP			DNS			DNS
				2000	1W STOP			DNS			DNS
	I-15*	SR-58*	BARSTOW	2001	UNSIG			DNS			DNS
				2000	UNSIG			DNS			DNS
	I-215*	2ND ST (NB)*	S. BERNARDINO	2001	SIG			DNS			DNS
				2000	SIG			DNS			DNS
	I-215 (I-ST)*	3RD ST (SB)	S. BERNARDINO	2001	SIG			DNS			DNS
				2000	SIG			DNS			DNS
	I-215*	5TH(SR-66)(@6TH)(NB)*	S. BERNARDINO	2001	SIG			DNS			DNS
				2000	SIG			DNS			DNS
	I-215*	5TH(SR-66)(@6TH)(SB)*	S. BERNARDINO	2001	SIG			DNS			DNS
				2000	SIG			DNS			DNS
	I-215*	BARTON (NB)*	GRAND TERRACE	2001	SIG			DNS			DNS
				2000	SIG			DNS			DNS

TABLE A-1
SAN BERNARDINO COUNTY CMP INTERSECTION LEVEL OF SERVICE

MONITORING AGENCY	NS	EW	JURISDICTION (CITY or COUNTY)	YEAR	CONTROL TYPE	AM PK HOUR DELAY SEC	AM PK HOUR V/C	AM PK HOUR LOS	PM PEAK H R DELAY SEC	PM PEAK H R V/C	PM PEAK H R LOS
CALTRANS cont'd	I-215*	BARTON (SB)*	GRAND TERRACE	2001	SIG			DNS			DNS
Note: Monitoring by				2000	SIG			DNS			DNS
Others											
	I-215*	DEVORE RD (NB)*	COUNTY	2001	1W STOP			DNS			DNS
				2000	1W STOP			DNS			DNS
	I-215*	DEVORE/CAJON (SB)*	COUNTY	2001	1W STOP			DNS			DNS
				2000	1W STOP			DNS			DNS
	I-215*	INLAND CNTR DR(NB)*	S. BERNARDINO	2001	SIG			DNS			DNS
				2000	SIG			DNS			DNS
	I-215*	INLAND CNTR DR(SB)*	S. BERNARDINO	2001	SIG			DNS			DNS
				2000	SIG			DNS			DNS
	I-215*	LA CADENA (NB)*	COLTON	2001	1W STOP			DNS			DNS
				2000	1W STOP			DNS			DNS
	I-215*	LA CADENA (SB)*	COLTON	2001	1W STOP			DNS			DNS
				2000	1W STOP			DNS			DNS
	I-215*	MILL (NB)*	S. BERNARDINO	2001	SIG			DNS			DNS
				2000	SIG			DNS			DNS
	I-215*	MILL (SB)*	S. BERNARDINO	2001	1W STOP			DNS			DNS
				2000	1W STOP			DNS			DNS
	I-215*	MTVRN/27(NB)*	S. BERNARDINO	2001	SIG			DNS			DNS
				2000	SIG			DNS			DNS
	I-215*	MTVRN/27(SB)*	S. BERNARDINO	2001	SIG			DNS			DNS
				2000	SIG			DNS			DNS
	I-215*	ORANGE SHOW RD (NB)*	S. BERNARDINO	2001	1W STOP			DNS			DNS
				2000	1W STOP			DNS			DNS
	I-215*	ORANGE SHOW RD (SB)*	S. BERNARDINO	2001	1W STOP			DNS			DNS
				2000	1W STOP			DNS			DNS
	I-215*	PALM (SR-206)(NB)*	S. BERNARDINO	2001	1W STOP			DNS			DNS
				2000	1W STOP			DNS			DNS
	I-215*	PALM (SR-206)(SB)*	S. BERNARDINO	2001	1W STOP			DNS			DNS
				2000	1W STOP			DNS			DNS
	I-215*	WSHNGTN(MTVRN)(NB)*	COLTON	2001	SIG			DNS			DNS
				2000	SIG			DNS			DNS
	I-215*	WSHNGTN(MTVRN)(SB)*	COLTON	2001	SIG			DNS			DNS
				2000	SIG			DNS			DNS

TABLE A-1
SAN BERNARDINO COUNTY CMP INTERSECTION LEVEL OF SERVICE

MONITORING AGENCY	NS	EW	JURISDICTION (CITY or COUNTY)	YEAR	CONTROL TYPE	AM PK HOUR DELAY SEC	AM PK HOUR V/C	AM PK HOUR LOS	PM PEAK HR DELAY SEC	PM PEAK HR V/C	PM PEAK HR LOS
CALTRANS cont'd	I-259*	HIGHLAND (NB)*	S. BERNARDINO	2001	SIG			DNS			DNS
Note: Monitoring by				2000	SIG			DNS			DNS
Others											
	I-259*	HIGHLAND (SB)*	S. BERNARDINO	2001	SIG			DNS			DNS
				2000	SIG			DNS			DNS
	KASOTA	SR-18*	APPLE VALLEY	2001	SIG			DNS			DNS
				2000	SIG			DNS			DNS
	KIOWA	SR-18*	APPLE VALLEY	2001	SIG			DNS			DNS
				2000	SIG			DNS			DNS
	KENDALL DR (SR-206)*	40TH ST*	S. BERNARDINO	2001	SIG			DNS			DNS
				2000	SIG			DNS			DNS
	KENWOOD	PALMDALE (SR-18)*	VICTORVILLE	2001	SIG			DNS			DNS
				2000	SIG			DNS			DNS
	MARIPOSA	PALMDALE (SR-18)*	VICTORVILLE	2001	SIG			DNS			DNS
				2000	SIG			DNS			DNS
	MILLIKEN	SR-60 (EB)*	ONTARIO	2001	SIG			DNS			DNS
				2000	SIG			DNS			DNS
	MILLIKEN	SR-60 (WB)*	ONTARIO	2001	SIG			DNS			DNS
				2000	SIG			DNS			DNS
	MILLIKEN*	FOOTHILL (SR-66)*	R. CUCAMONGA	2001	SIG			DNS			DNS
				2000	SIG			DNS			DNS
	MILLIKEN*	HIGHLAND (SR-30)*	R. CUCAMONGA	2001	SIG			DNS			DNS
				2000	SIG			DNS			DNS
	MILLIKEN*	I-10 (EB)*	ONTARIO	2001	1W STOP			DNS			DNS
				2000	1W STOP			DNS			DNS
	MILLIKEN*	I-10 (WB)*	ONTARIO	2001	1W STOP			DNS			DNS
				2000	1W STOP			DNS			DNS
	MONTE VISTA*	FOOTHILL (SR-66)*	MONTCLAIR	2001	SIG			DNS			DNS
				2000	SIG			DNS			DNS
	MONTE VISTA*	I-10 (EB)*	MONTCLAIR	2001	SIG			DNS			DNS
				2000	SIG			DNS			DNS
	MONTE VISTA	I-10 (WB)*	MONTCLAIR	2001	SIG			DNS			DNS
				2000	SIG			DNS			DNS
	MOUNTAIN VIEW*	I-10 (EB)*	LOMA LINDA	2001	1W STOP			DNS			DNS
				2000	1W STOP			DNS			DNS

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SAN BERNARDINO COUNTY CMP INTERSECTION LEVEL OF SERVICE

MONITORING AGENCY	NS	EW	JURISDICTION (CITY or COUNTY)	YEAR	CONTROL TYPE	AM PK HOUR DELAY SEC	AM PK HOUR V/C	AM PK HOUR LOS	PM PEAK H R DELAY SEC	PM PEAK H R V/C	PM PEAK H R LOS
CALTRANS cont'd	MOUNTAIN VIEW*	I-10 (WB)*	LOMA LINDA	2001	1W STOP			DNS			DNS
Note: Monitoring by				2000	1W STOP			DNS			DNS
Others											
	MOUNTAIN (SR-30)*	16TH ST (SR-30)*	UPLAND	2001	SIG			DNS			DNS
				2000	SIG			DNS			DNS
	MOUNTAIN (SR-30)*	19TH ST (SR-30)*	UPLAND	2001	4W STOP			DNS			DNS
				2000	4W STOP			DNS			DNS
	MOUNTAIN*	FOOTHILL (SR-66)*	UPLAND	2001	SIG			DNS			DNS
				2000	SIG			DNS			DNS
	MOUNTAIN*	I-10 (EB)*	UPLAND	2001	SIG			DNS			DNS
				2000	SIG			DNS			DNS
	MOUNTAIN*	I-10 (WB)*	UPLAND	2001	SIG			DNS			DNS
				2000	SIG			DNS			DNS
	MOUNTAIN*	SR-60 (EB)*	CHINO	2001	SIG	15.0	0.65	C	19.7	0.81	C
				2000	SIG	15.0	0.65	C	19.7	0.81	C
	MOUNTAIN*	SR-60 (WB)*	CHINO	2001	SIG	17.2	0.62	C	14.9	0.81	B
				2000	SIG	17.2	0.62	C	14.9	0.81	B
	MT VERNON(SPERRY)*	I-10 (WB)*	COLTON	2001	1W STOP			DNS			DNS
				2000	1W STOP			DNS			DNS
	MT VERNON*	5TH (FOOTHILL)(SR-66)*	S. BERNARDINO	2001	SIG			DNS			DNS
				2000	SIG			DNS			DNS
	MT VERNON*	I-10 (EB)*	COLTON	2001	1W STOP			DNS			DNS
				2000	1W STOP			DNS			DNS
	NAVAJO	SR-18*	APPLE VALLEY	2001	SIG			DNS			DNS
				2000	SIG			DNS			DNS
	ORANGE (SR-38)*	COLTON AVENUE	REDLANDS	2001	2W STOP			DNS			DNS
				2000	2W STOP			DNS			DNS
	ORANGE (SR-38)*	I-10 (@PEARL) (EB)*	REDLANDS	2001	SIG			DNS			DNS
				2000	SIG			DNS			DNS
	ORANGE (SR-38)*	LUGONIA (SR-38)*	REDLANDS	2001	SIG			DNS			DNS
				2000	SIG			DNS			DNS
	PALM*	HIGHLAND (SR-30)*	S. BERNARDINO	2001	SIG			DNS			DNS
				2000	SIG			DNS			DNS
	PALMDALE	MARIPOSA	VICTORVILLE	2001				DNS			DNS
				2000				DNS			DNS
	PEPPER*	FOOTHILL (SR-66)*	RIALTO	2001	SIG			DNS			DNS
				2000	SIG			DNS			DNS

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SAN BERNARDINO COUNTY CMP INTERSECTION LEVEL OF SERVICE

MONITORING AGENCY	NS	EW	JURISDICTION (CITY or COUNTY)	YEAR	CONTROL TYPE	AM PK HOUR DELAY SEC	AM PK HOUR V/C	AM PK HOUR LOS	PM PEAK HR DELAY SEC	PM PEAK HR V/C	PM PEAK HR LOS
CALTRANS cont'd	PEPPER*	I-10 (EB)*	COLTON	2001	1W STOP			DNS			DNS
Note: Monitoring by				2000	1W STOP			DNS			DNS
Others											
	PEPPER*	I-10 (WB)*	COLTON	2001	1W STOP			DNS			DNS
				2000	1W STOP			DNS			DNS
	PIPELINE	SR-142*	CHINO HILLS	2001	SIG			DNS			DNS
				2000	SIG			DNS			DNS
	RAMONA	SR-60 (EB)*	CHINO	2001	SIG			DNS			DNS
				2000	SIG			DNS			DNS
	RAMONA	SR-60 (WB)*	CHINO	2001	SIG			DNS			DNS
				2000	SIG			DNS			DNS
	RANCHERIAS	SR-18*	APPLE VALLEY	2001	SIG			DNS			DNS
				2000	SIG			DNS			DNS
	RANCHO*	FOOTHILL (SR-66)*	S. BERNARDINO	2001	1W STOP			DNS			DNS
				2000	1W STOP			DNS			DNS
	RANCHO*	I-10 (EB)*	COLTON	2001	SIG			DNS			DNS
				2000	SIG			DNS			DNS
	RANCHO*	I-10 (WB)*	COLTON	2001	SIG			DNS			DNS
				2000	SIG			DNS			DNS
	RIVERSIDE*	FOOTHILL (SR-66)*	RIALTO	2001	SIG			DNS			DNS
				2000	SIG			DNS			DNS
	RIVERSIDE*	HIGHLAND (SR-30)*	RIALTO	2001	SIG			DNS			DNS
				2000	SIG			DNS			DNS
	RIVERSIDE*	I-10 (EB)*	RIALTO	2001	SIG			DNS			DNS
				2000	SIG			DNS			DNS
	RIVERSIDE*	I-10 (WB)*	RIALTO	2001	SIG			DNS			DNS
				2000	SIG			DNS			DNS
	RIVERSIDE*	VALLEY	RIALTO	2001	SIG			DNS			DNS
				2000	SIG			DNS			DNS
	SAN ANTONIO	FOOTHILL (SR-66)*	UPLAND	2001	SIG			DNS			DNS
				2000	SIG			DNS			DNS
	SIERRA*	FOOTHILL (SR-66)*	FONTANA	2001	SIG			DNS			DNS
				2000	SIG			DNS			DNS
	SIERRA*	HIGHLAND (SR-30)*	FONTANA	2001	SIG			DNS			DNS
				2000	SIG			DNS			DNS
	SIERRA*	I-10 (EB)*	FONTANA	2001	SIG			DNS			DNS
				2000	SIG			DNS			DNS

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SAN BERNARDINO COUNTY CMP INTERSECTION LEVEL OF SERVICE

MONITORING AGENCY	NS	EW	JURISDICTION (CITY or COUNTY)	YEAR	CONTROL TYPE	AM PK HOUR DELAY SEC	AM PK HOUR V/C	AM PK HOUR LOS	PM PEAK HR DELAY SEC	PM PEAK HR V/C	PM PEAK HR LOS
CALTRANS cont'd	SIERRA*	I-10 (WB)*	FONTANA	2001	SIG			DNS			DNS
Note: Monitoring by				2000	SIG			DNS			DNS
Others											
	SIERRA*	I-15 (NB)*	FONTANA	2001	1W STOP			DNS			DNS
				2000	1W STOP			DNS			DNS
	SIERRA*	I-15 (SB)*	COUNTY	2001	1W STOP			DNS			DNS
				2000	1W STOP			DNS			DNS
	SR-18*	BEAR VALLEY*	VICTORVILLE	2001	1W STOP			DNS			DNS
				2000	1W STOP			DNS			DNS
	SR-247*	SR-62*	COUNTY	2001	SIG			DNS			DNS
				2000	SIG			DNS			DNS
	SR-30*	5TH ST*	HIGHLAND	2001	SIG			DNS			DNS
				2000	SIG			DNS			DNS
	SR-30(WB)*	HIGHLAND*	S. BERNARDINO	2001	SIG			DNS			DNS
				2000	SIG			DNS			DNS
	SR-30(EB)*	HIGHLAND *	S. BERNARDINO	2001	SIG			DNS			DNS
				2000	SIG			DNS			DNS
	SR-330(NB)*	HIGHLAND*	S.BERNARDINO/HIGHLAND	2001	SIG			DNS			DNS
				2000	SIG			DNS			DNS
	SR-330(SB)*	HIGHLAND*	S.BERNARDINO/HIGHLAND	2001	SIG			DNS			DNS
				2000	SIG			DNS			DNS
	SR-30*	I-10 (EB)*	REDLANDS	2001	UNSIG			DNS			DNS
				2000	UNSIG			DNS			DNS
	SR-30*	I-10 (WB)*	REDLANDS	2001	UNSIG			DNS			DNS
				2000	UNSIG			DNS			DNS
	SR-30*	SAN BERNARDINO (NB)*	REDLANDS	2001	SIG			DNS			DNS
				2000	SIG			DNS			DNS
	SR-30*	SAN BERNARDINO (SB)*	REDLANDS	2001	1W STOP			DNS			DNS
				2000	1W STOP			DNS			DNS
	SR-38*	SR-18*	COUNTY	2001	1W STOP			DNS			DNS
				2000	1W STOP			DNS			DNS
	SR-71*	CENTRAL	CHINO HILLS	2001	SIG			DNS			DNS
				2000	SIG			DNS			DNS
	SR-71*	CHINO HILLS PRKWY*	CHINO/CHINO HILLS	2001	SIG			DNS			DNS
				2000	SIG			DNS			DNS
	SR-71*	GRAND AVE*	CHINO/CHINO HILLS	2001	SIG			DNS			DNS
				2000	SIG			DNS			DNS

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SAN BERNARDINO COUNTY CMP INTERSECTION LEVEL OF SERVICE

MONITORING AGENCY	NS	EW	JURISDICTION (CITY or COUNTY)	YEAR	CONTROL TYPE	AM PK HOUR DELAY SEC	AM PK HOUR V/C	AM PK HOUR LOS	PM PEAK H R DELAY SEC	PM PEAK H R V/C	PM PEAK H R LOS
CALTRANS cont'd	SR-71*	PIPELINE AVE.	CHINO/CHINO HILLS	2001	SIG			DNS			DNS
Note: Monitoring by				2000				DNS			DNS
Others											
	SR-71*	RIVERSIDE DR.*	CHINO/CHINO HILLS	2001	SIG			DNS			DNS
				2000				DNS			DNS
	TENNESSEE*	I-10 (EB)*	REDLANDS	2001	SIG			DNS			DNS
				2000	SIG			DNS			DNS
	TENNESSEE*	I-10 (WB)*	REDLANDS	2001	SIG			DNS			DNS
				2000	SIG			DNS			DNS
	TIPPECANOE*	I-10 (EB)*	LOMA LINDA	2001	SIG			DNS			DNS
				2000	SIG			DNS			DNS
	TIPPECANOE*	I-10 (WB)*	LOMA LINDA	2001	SIG			DNS			DNS
				2000	SIG			DNS			DNS
	US-395*	EL MIRAGE LAKE RD*	ADELANTO	2001	1W STOP			DNS			DNS
				2000	1W STOP			DNS			DNS
	US-395*	PALMDALE RD (SR-18)*	VICTORVILLE	2001	SIG			DNS			DNS
				2000	SIG			DNS			DNS
	US-395*	PHELAN*	COUNTY	2001	1W STOP			DNS			DNS
				2000	1W STOP			DNS			DNS
	VICTORIA*	HIGHLAND (SR-30)*	HIGHLAND	2001	SIG			DNS			DNS
				2000	SIG			DNS			DNS
	VINEYARD	FOOTHILL (SR-66)*	R. CUCAMONGA	2001	SIG			DNS			DNS
				2000	SIG			DNS			DNS
	VINEYARD	I-10 (EB)*	ONTARIO	2001	SIG			DNS			DNS
				2000	1W STOP			DNS			DNS
	VINEYARD	I-10 (WB)*	ONTARIO	2001	SIG			DNS			DNS
				2000	1W STOP			DNS			DNS
	VINEYARD	SR-60 (EB)*	ONTARIO	2001	1W STOP			DNS			DNS
				2000	1W STOP			DNS			DNS
	VINEYARD	SR-60 (WB)*	ONTARIO	2001	1W STOP			DNS			DNS
				2000	1W STOP			DNS			DNS
	WABASH*	I-10 (WB)*	REDLANDS	2001	1W STOP			DNS			DNS
				2000	1W STOP			DNS			DNS
	WABASH*	SR-38 (LUGONIA)*	REDLANDS	2001	4W STOP			DNS			DNS
				2000	4W STOP			DNS			DNS

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SAN BERNARDINO COUNTY CMP INTERSECTION LEVEL OF SERVICE

MONITORING AGENCY	NS	EW	JURISDICTION (CITY or COUNTY)	YEAR	CONTROL TYPE	AM PK HOUR DELAY SEC	AM PK HOUR V/C	AM PK HOUR LOS	PM PEAK HR DELAY SEC	PM PEAK HR V/C	PM PEAK HR LOS
CALTRANS cont'd	WATERMAN (SR-18)*	40TH ST*	S. BERNARDINO	2001	SIG			DNS			DNS
Note: Monitoring by				2000	SIG			DNS			DNS
Others											
	WATERMAN (SR-18)*	SR-30 (EB)*	S. BERNARDINO	2001	SIG			DNS			DNS
				2000	SIG			DNS			DNS
	WATERMAN (SR-18)*	SR-30 (WB)*	S. BERNARDINO	2001	SIG			DNS			DNS
				2000	SIG			DNS			DNS
	WATERMAN*	I-10 (EB)*	S. BERNARDINO	2001	SIG			DNS			DNS
				2000	SIG			DNS			DNS
	WATERMAN*	I-10 (WB)*	S. BERNARDINO	2001	SIG			DNS			DNS
				2000	SIG			DNS			DNS
CHINO	CENTRAL*	CHINO HILLS PKWY*	CHINO	2001	SIG	18	0.60	C	13	0.30	B
				2000	SIG	18	0.60	C	13	0.30	B
	CENTRAL*	EDISON*	CHINO	2001	SIG	17	0.50	C	19	0.58	C
				2000	SIG	17	0.50	C	19	0.58	C
	CENTRAL*	RIVERSIDE*	CHINO	2001	SIG	40	DNS	D	55	DNS	D
				2000	SIG	24	0.70	C	41	0.86	E
	CENTRAL*	WALNUT*	CHINO	2001	SIG	26	DNS	C	35	DNS	C
				2000	SIG	25	0.60	C	51	0.82	E
	MOUNTAIN*	EDISON*	CHINO	2001	SIG	13	0.38	B	13	0.48	B
				2000	SIG	13	0.38	B	13	0.48	B
	MOUNTAIN*	RIVERSIDE*	CHINO	2001	SIG	35	DNS	C	35	DNS	C
				2000	SIG	25	0.58	C	38	0.77	D
	MOUNTAIN*	WALNUT*	CHINO	2001	SIG	27	DNS	C	29	DNS	C
				2000	SIG	27	0.83	D	40	0.88	E
	RAMONA	RIVERSIDE*	CHINO	2001	SIG	31	DNS	C	31	DNS	C
				2000	SIG	51	1.02	F**	31	0.81	D
	RESERVOIR*	RIVERSIDE*	CHINO/SB CO.	2001	SIG	10	0.35	B	9	0.33	B
				2000	SIG	10	0.35	B	9	0.33	B
CHINO HILLS	CHINO HILLS PARKWAY	GRAND	CHINO HILLS	2001	SIG	20	0.77	C	15	0.72	C
				2000	SIG	26	0.84	D	24	0.84	C
	PEYTON	GRAND	CHINO HILLS	2001	SIG	18	0.67	C	18	0.69	C
				2000	SIG	18	0.67	C	18	0.69	C

TABLE A-1
SAN BERNARDINO COUNTY CMP INTERSECTION LEVEL OF SERVICE

MONITORING AGENCY	NS	EW	JURISDICTION (CITY or COUNTY)	YEAR	CONTROL TYPE	AM PK HOUR DELAY SEC	AM PK HOUR V/C	AM PK HOUR LOS	PM PEAK H R DELAY SEC	PM PEAK H R V/C	PM PEAK H R LOS
COLTON	BARTON*/COOLEY	WASHINGTON*	COLTON	2001	SIG	24	0.82	C	23	0.87	C
				2000	SIG	24	0.81	C	28	0.83	D
	HUNTS LANE*	WASHINGTON*	COLTON	2001	SIG	5	0.48	B	9	0.75	B
				2000	SIG	9	0.81	B	22	0.97	C
	LA CADENA*	RANCHO*	COLTON	2001	1W STOP	30		D	30		D
				2000	1W STOP	30		D	30		D
	MT. VERNON	COLTON	COLTON	2001	SIG	6	0.38	B	11	0.91	B
				2000	SIG	6	0.38	B	11	0.91	B
	MT. VERNON	COOLEY	COLTON	2001	SIG	20	0.68	C	14	0.69	B
				2000	SIG	23	0.75	C	14	0.84	B
	MT. VERNON	LA CAD/GRA NT	COLTON	2001	SIG	16	0.33	C	17	0.41	C
				2000	SIG	19	0.48	C	26	0.70	D
	MT VERNON*	VALLEY	COLTON	2001	SIG	11	0.61	B	15	0.76	C
				2000	SIG	11	0.61	B	15	0.76	C
	MT VERNON*	WASHINGTON*	COLTON	2001	SIG	27	0.56	D	0.27	0.75	D
				2000	SIG	22	0.72	C	24	0.81	C
	PENN/PENN WAY	MILL	COLTON	2001	SIG	10	0.54	B	10	0.53	B
				2000	SIG	10	0.35	B	11	0.43	B
	PEPPER*	VALLEY	COLTON	2001	SIG	18	0.50	C	24	0.83	C
				2000	SIG	14	0.62	B	13	0.73	B
	PEPPER	SAN BERNARDINO	COLTON	2001	SIG	11	0.62	B	10	0.56	B
				2000	SIG	11	0.55	B	13	0.71	B
	RECHE CANYON*	WASHINGTON (BARTON)*	COLTON	2001	SIG	16	0.90	C	25	0.99	C
				2000	SIG	15	0.83	B	17	0.86	C
	RANCHO*	AGUA MANSA*	COLTON	2001	2W STOP	25		D	22		C
				2000	2W STOP	25		D	22		C
	RANCHO	VALLEY	COLTON	2001	SIG	13	0.58	B	12	0.53	B
				2000	SIG	11	0.72	B	9	0.63	B
	RANCHO	OLIVE	COLTON	2001	SIG	14	0.69	B	10	0.44	B
				2000	SIG	4	0.43	A	3	0.55	A
	RANCHO	MILL	COLTON	2001	SIG	5	0.28	B	5	0.31	B
				2000	SIG	5	0.28	B	5	0.31	B
FONTANA	ALDER	MILLER	FONTANA	2001	4W STOP	12		B	10		A
				2000	4W STOP	12		B	10		A

TABLE A-1
SAN BERNARDINO COUNTY CMP INTERSECTION LEVEL OF SERVICE

MONITORING AGENCY	NS	EW	JURISDICTION (CITY or COUNTY)	YEAR	CONTROL TYPE	AM PK HOUR DELAY SEC	AM PK HOUR V/C	AM PK HOUR LOS	PM PEAK HR DELAY SEC	PM PEAK HR V/C	PM PEAK HR LOS
FONTANA continued	ALDER*	ARROW	FONTANA	2001	SIG	30	0.65	C	33	0.74	C
				2000	SIG	30	0.65	C	33	0.74	C
	ALDER*	BASE LINE*	FONTANA	2001	SIG	26	0.68	C	31	0.66	C
				2000	SIG	26	0.68	C	31	0.66	C
	ALDER*	SAN BERNARDINO	FONTANA	2001	4W STOP	12		B	13		B
				2000	4W STOP	12		B	13		B
	CHERRY*	BASE LINE*	FONTANA	2001	SIG	27	0.42	C	26	0.51	C
				2000	SIG	27	0.42	C	26	0.51	C
	CHERRY*	SLOVER	FONTANA/SB CO.	2001	SIG	44	0.82	C	28	0.68	C
				2000	SIG	44	0.82	C	28	0.68	C
	CHERRY*	VALLEY	FONTANA	2001	SIG	33	0.65	C	45	0.83	D
				2000	SIG	33	0.65	C	45	0.83	D
	CITRUS*	ARROW	FONTANA	2001	SIG	23	0.46	C	29	0.75	C
				2000	SIG	23	0.46	C	29	0.75	C
	CITRUS*	BASE LINE*	FONTANA	2001	SIG	25	0.50	C	37	0.78	D
				2000	SIG	25	0.50	C	37	0.78	D
	CITRUS*	JURUPA*	FONTANA	2001	4W STOP	11		B	15		C
				2000	4W STOP	11		B	15		C
	CITRUS*	MILLER	FONTANA	2001	4W STOP	10		A	13		B
				2000	4W STOP	10		A	13		B
	CITRUS*	SAN BERNARDINO	FONTANA	2001	SIG	22	0.41	C	24	0.75	C
				2000	SIG	22	0.41	C	24	0.57	C
	CITRUS*	SLOVER	FONTANA	2001	SIG	EXEMPT - CONSTRUCTION AREA					
				2000	SIG	82	0.93	F	92	0.95	F
	ETIWANDA*	JURUPA*	FONTANA	2001	SIG	28	0.53	C	33	0.67	C
				2000	SIG	28	0.53	C	33	0.67	C
	MULBERRY*	JURUPA*	FONTANA	2001	SIG	33	0.51	C	35	0.54	C
				2000	SIG	33	0.51	C	35	0.54	C
	SIERRA*	ARROW	FONTANA	2001	SIG	22	0.43	C	25	0.65	C
				2000	SIG	22	0.43	C	25	0.65	C
	SIERRA*	BASE LINE*	FONTANA	2001	SIG	28	0.59	C	30	0.70	C
				2000	SIG	28	0.59	C	30	0.70	C
	SIERRA*	JURUPA*	FONTANA	2001	SIG	27	0.41	C	30	0.61	C
				2000	SIG	27	0.41	C	30	0.61	C

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MONITORING AGENCY	NS	EW	JURISDICTION (CITY or COUNTY)	YEAR	CONTROL TYPE	AM PK HOUR DELAY SEC	AM PK HOUR V/C	AM PK HOUR LOS	PM PEAK HR DELAY SEC	PM PEAK HR V/C	PM PEAK HR LOS
FONTANA	SIERRA*	RIVERSIDE*	FONTANA	2001	SIG	17	0.71	C	27	0.76	C
continued				2000	SIG	17	0.71	C	27	0.76	C
	SIERRA*	SAN BERNARDINO	FONTANA	2001	SIG	23	0.53	C	31	0.81	C
				2000	SIG	23	0.53	C	31	0.81	C
	SIERRA*	SLOVER	FONTANA	2001	SIG	26	0.49	C	29	0.58	C
				2000	SIG	26	0.49	C	29	0.58	C
	SIERRA*	VALLEY	FONTANA	2001	SIG	EXEMPT - CONSTRUCTION AREA					
				2000	SIG	39	0.84	D	42	0.82	D
GRAND TERRACE	MICHIGAN	BARTON*	GRAND TERRACE	2001	SIG	12	0.45	B	10	0.54	B
				2000	SIG	12	0.45	B	10	0.54	B
	CANAL	BARTON*	GRAND TERRACE	2001	SIG	9	0.23	A	13	0.32	B
				2000	SIG	9	0.23	A	13	0.32	B
	MT. VERNON	BARTON*	GRAND TERRACE	2001	SIG	17	0.38	B	17	0.49	B
				2000	SIG	17	0.38	B	17	0.49	B
	PRESTON	BARTON*	GRAND TERRACE	2001	SIG	13	0.18	B	7	0.20	A
				2000	SIG	13	0.18	B	7	0.20	A
HESPERIA	I AVE.	BEAR VALLEY*	HESPERIA/VICTORVILLE	2001	SIG						F**
				2000	SIG			DNS			DNS
	3RD ST	MAIN ST*	HESPERIA	2001	SIG	10	0.49	B	12	0.67	B
				2000	SIG	10	0.49	B	12	0.67	B
	"C"	MAIN ST*	HESPERIA	2001	SIG	21	0.71	C	27	0.85	D
				2000	SIG	25	0.76	C	28	0.88	D
	7TH	BEAR VALLEY*	HESPERIA/VICTORVILLE	2001	SIG			DNS	27	0.70	C
				2000	SIG			DNS			DNS
	COTTONWOOD	BEAR VALLEY*	HESPERIA/VICTORVILLE	2001	SIG			DNS			F**
				2000	SIG			DNS			DNS
	MARIPOSA	MAIN*	HESPERIA	2001	SIG	8	0.40	B	12	0.51	B
				2000	SIG	8	0.40	B	12	0.51	B
	MAPLE	MAIN*	HESPERIA	2001	SIG	13	0.49	B	12	0.54	B
				2000	SIG	13	0.49	B	12	0.54	B
	"I"	MAIN	HESPERIA	2001	SIG	15	0.47	C	18	0.62	C
				2000	SIG	15	0.47	C	18	0.62	C
HIGHLAND	DEL ROSA DR.	3RD STREET	HIGHLAND	2001	SIG	11	0.57	B	12	0..65	B
				2000	SIG	11	0.57	B	12	0.65	B

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MONITORING AGENCY	NS	EW	JURISDICTION (CITY or COUNTY)	YEAR	CONTROL TYPE	AM PK HOUR DELAY SEC	AM PK HOUR V/C	AM PK HOUR LOS	PM PEAK H R DELAY SEC	PM PEAK H R V/C	PM PEAK H R LOS
HIGHLAND cont'd	DEL ROSA DR.	5TH STREET	HIGHLAND	2001	SIG	11	0.27	B	11	0.32	B
				2000	SIG	11	0.27	B	11	0.32	A
	PALM*	3RD STREET*	HIGHLAND	2001	SIG	37	0.35	D	37	0.38	D
				2000	SIG	37	0.35	D	37	0.38	D
	PALM*	5TH ST*	HIGHLAND	2001	SIG	36	0.71	D	38	0.57	D
				2000	SIG	36	0.71	D	38	0.57	D
	PALM*	BASE LINE*	HIGHLAND	2001	SIG	20	0.35	C	20	0.42	C
				2000	SIG	20	0.35	C	20	0.42	C
	VICTORIA*	5TH ST*	HIGHLAND	2001	SIG	10	0.58	B	8	0.38	A
				2000	SIG	10	0.58	B	8	0.38	A
	BOULDER*	5TH ST.*	HIGHLAND	2001	SIG	56	0.95	E	56	0.91	E
				2000	SIG	18	0.73	C	25	0.76	C
	BOULDER*	BASE LINE*	HIGHLAND	2001	SIG	34	0.79	C	31	0.59	C
				2000	SIG	19	0.48	C	19	0.36	C
	BOULDER*	HIGHLAND*	HIGHLAND	2001	SIG	26	0.34	C	31	0.55	C
				2000	SIG	26	0.34	C	31	0.55	C
	STERLING	BASE LINE*	HIGHLAND	2001	SIG	29	0.39	C	30	0.52	C
				2000	SIG	19	0.40	C	20	0.47	C
	CHURCH	5TH ST.*	HIGHLAND	2001	SIG	25	0.76	C	22	0.39	C
					SIG	19	0.47	C	19	0.31	C
	VICTORIA*	BASE LINE*	HIGHLAND	2001	SIG	29	0.36	C	28	0.35	C
				2000	SIG	20	0.37	C	20	0.42	C
	PALM*	PACIFIC	HIGHLAND	2001	4WSTOP	31		D	172		F
				2000	4WSTOP	6		B	7		B
LOMA LINDA	ANDERSON (TIPCANOE)	BARTON*	LOMA LINDA	2001	SIG	18	0.67	C	21	0.75	C
				2000	SIG	19	0.59	C	25	0.73	C
	ANDERSON (TIPCANOE)*	REDLANDS*	LOMA LINDA	2001	SIG	18	0.62	C	17	0.59	C
				2000	SIG	16	0.57	C	19	0.65	C
	ANDERSON*	STEWART	LOMA LINDA	2001	SIG	10	0.41	B	11	0.54	C
				2000	SIG	15	0.67	B	10	0.46	B
	CALIFORNIA*	BARTON*	LOMA LINDA	2001	SIG	8	0.56	B	4	0.53	A
				2000	SIG	10	0.70	B	8	0.54	B
	MOUNTAIN VIEW*	BARTON*	LOMA LINDA	2001	SIG	14	0.42	B	22	0.72	C
				2000	SIG	13	0.54	C	17	0.53	C

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MONITORING AGENCY	NS	EW	JURISDICTION (CITY or COUNTY)	YEAR	CONTROL TYPE	AM PK HOUR DELAY SEC	AM PK HOUR V/C	AM PK HOUR LOS	PM PEAK H R DELAY SEC	PM PEAK H R V/C	PM PEAK H R LOS
LOMA LINDA	MOUNTAIN VIEW*	REDLANDS*	LOMA LINDA	2001	SIG	18	0.52	C	18	0.59	C
continued				2000	SIG	19	0.60	C	18	0.60	C
	UNIVERSITY	BARTON*	LOMA LINDA	2001	SIG	21	0.75	C	25	0.81	D
				2000	SIG	17	0.64	C	19	0.73	C
MONTCLAIR	CENTRAL*	4TH (S. BERNARDINO)	MONTCLAIR	2001	SIG	18	0.67	C	18	0.80	C
				2000	SIG	18	0.67	C	18	0.80	C
	CENTRAL*	ARROW HWY (8TH ST)*	MONTCLAIR	2001	SIG	20	0.60	C	21	0.72	C
				2000	SIG	20	0.60	C	21	0.72	C
	CENTRAL*	HOLT*	MONTCLAIR	2001	SIG	25	0.64	C	26	0.75	C
				2000	SIG	17	0.74	C	20	0.83	C
	CENTRAL*	MORENO	MONTCLAIR	2001	SIG	16	0.36	C	23	0.87	C
				2000	SIG	16	0.36	C	23	0.87	C
	CENTRAL*	MISSION*	MONTCLAIR	2001	SIG	18	0.65	C	19	0.76	C
				2000	SIG	18	0.65	C	19	0.76	C
	MONTE VISTA*	ARROW HWY (8TH ST)*	MONTCLAIR	2001	SIG	25	0.56	C	33	0.82	C
				2000	SIG	15	0.57	B	19	0.80	C
ONTARIO	ARCHIBALD*	RIVERSIDE	ONTARIO	2001	SIG	18	0.63	C	18	0.82	C
				2000	SIG	18	0.33	C	19	0.56	C
	ETIWANDA	SLOVER/AIRPORT DRIVE	ONTARIO	2001	SIG	30	0.65	C	61	1.01	F**
				2000	SIG	21	0.56	C	22	0.74	C
	ETIWANDA	4TH	ONTARIO	2001	SIG			DNS			DNS
				2000							
	GROVE	4TH	ONTARIO	2001	SIG	37	0.66	D	29	0.86	D
				2000	SIG	26	0.56	D	22	0.69	C
	GROVE	HOLT*	ONTARIO	2001	SIG	52	1.02	F**	51	1.01	F**
				2000	SIG	38	0.93	D	58	0.80	E
	GROVE	MISSION*	ONTARIO	2001	SIG	13	0.63	C	25	0.92	B
				2000	SIG	17	0.80	C	19	0.91	B
	HAVEN	MISSION*	ONTARIO	2001	SIG	16	0.66	C	20	0.59	C
				2000	SIG	14	0.47	B	15	0.37	C
	HAVEN*	4TH	ONTARIO	2001	SIG	17	0.68	C	19	0.72	C
				2000	SIG	16	0.53	C	21	0.83	C
	MILLIKEN	4TH	ONTARIO	2001	SIG			DNS			DNS

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MONITORING AGENCY	NS	EW	JURISDICTION (CITY or COUNTY)	YEAR	CONTROL TYPE	AM PK HOUR DELAY SEC	AM PK HOUR V/C	AM PK HOUR LOS	PM PEAK H R DELAY SEC	PM PEAK H R V/C	PM PEAK H R LOS
ONTARIO cont'd	MILLIKEN	MISSION*	ONTARIO	2001	SIG	14	0.40	B	15	0.41	B
				2000	SIG	13	0.31	B	14	0.34	B
	MOUNTAIN*	4TH	ONTARIO	2001	SIG	11	0.50	B	12	0.59	B
				2000	SIG	11	0.59	B	15	0.84	B
	MOUNTAIN*	HOLT*	ONTARIO	2001	SIG	19	0.69	C	26	0.90	D
				2000	SIG	21	0.72	C	23	0.82	C
	MOUNTAIN*	MISSION*	ONTARIO	2001	SIG	19	0.77	C	26	0.82	D
				2000	SIG	19	0.68	C	21	0.83	C
	MOUNTAIN*	PHILADELPHIA	ONTARIO	2001	SIG	33	0.86	D	31	0.92	D
				2000	SIG	27	0.54	D	29	0.87	D
	VINEYARD	4TH	ONTARIO	2001	SIG			DNS			DNS
	VINEYARD	HOLT*	ONTARIO	2001	SIG	17	0.64	C	16	0.56	C
				2000	SIG	23	0.87	C	22	0.69	C
	VINEYARD	MISSION*	ONTARIO	2001	SIG	18	0.48	C	46	0.58	E
				2000	SIG	24	0.47	C	18	0.32	C
R. CUCAMONGA	ARCHIBALD*	BASE LINE*	R. CUCAMONGA	2001	SIG	EXEMPT - CONSTRUCTION AREA					
				2000	SIG	12	0.67	B	22	0.91	C
	ARCHIBALD*	4TH*	R. CUCAMONGA	2001	SIG	10	0.49	B	12	0.72	B
				2000	SIG	13	0.58	B	19	0.80	C
	ARCHIBALD*	ARROW*	R. CUCAMONGA	2001	SIG	13	0.74	B	20	0.90	C
				2000	SIG	18	0.11	C	26	0.92	D
	CARNELIAN	BASE LINE*	R. CUCAMONGA	2001	SIG		EXEMPT - CONSTRUCTION AREA				
				2000	SIG	27	0.89	D	23	0.77	C
	ETIWANDA	BASE LINE*	R. CUCAMONGA	2001	SIG	15	EXEMPT - CONSTRUCTION AREA				
				2000	SIG	15	0.53	B	14	0.52	B
	GROVE	8TH ST*	RCM/ONT/UPLAND	2001	SIG	7	0.41	B	7	0.47	B
				2000	SIG	8	0.31	B	9	0.47	B
	HAVEN*	ARROW*	RANCHO CUCAMONGA	2001	SIG	13	0.64	B	16	0.66	C
				2000	SIG	10	0.63	B	13	0.85	B
	GROVE	10TH (ARROW)*	UPLAND	2001	SIG	9	0.81	B	17	0.92	C
				2000	SIG	26	0.94	D	32	0.99	D
	HAVEN*	BASE LINE*	R. CUCAMONGA	2001	SIG	EXEMPT - CONSTRUCTION AREA					
				2000	SIG	15	0.75	C	14	0.74	B

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R. CUCAMONGA continued	MILLIKEN*	4TH*	R. CUCAMONGA/ONT	2001	SIG	12	0.54	B	15	0.68	B
				2000	SIG	13	0.40	B	27	0.81	D
	MILLIKEN*	ARROW*	R. CUCAMONGA	2001	SIG	26	0.85	D	21	0.84	C
				2000	SIG	15	0.61	B	33	0.70	D
	MILLIKEN*	BASE LINE*	R. CUCAMONGA	2001	SIG	EXEMPT - CONSTRUCTION AREA					
				2000	SIG	11	0.41	B	11	0.44	B
	VINEYARD	ARROW*	R. CUCAMONGA	2001	SIG	18	0.64	C	20	0.82	C
				2000	SIG	27	0.74	C	36	0.80	D
REDLANDS	ALABAMA*	BARTON*	REDLANDS	2001	SIG	16	0.66	C	16	0.67	C
				2000	SIG	16	0.66	C	16	0.67	C
	ALABAMA*	REDLANDS*	REDLANDS	2001	SIG	23	0.79	C	19	0.52	C
				2000	SIG	23	0.79	C	19	0.52	C
	CALIFORNIA*	SAN BERNARDINO*	REDLANDS	2001	2W STOP			A			A
				2000	2W STOP			A			A
	CALIFORNIA*	REDLANDS*	REDLANDS	2001	SIG	29	0.85	D	23	0.87	C
				2000	SIG	21	0.78	C	22	0.83	C
	MOUNTAIN VIEW*	SAN BERNARDINO*	REDLANDS	2001	4W STOP	7		B	16		C
				2000	4W STOP	7		B	16		C
	ORANGE*	CITRUS (BROOKSIDE)*	REDLANDS	2001	SIG	3	0.38	A	4	0.54	A
				2000	SIG	3	0.38	A	4	0.54	A
	ORANGE*	REDLANDS*	REDLANDS	2001	SIG	13	0.50	B	18	0.70	C
				2000	SIG	13	0.50	B	18	0.70	C
	ORANGE*	SAN BERNARDINO*	REDLANDS	2001	SIG	4	0.48	A	4	0.62	A
				2000	SIG	4	0.48	A	4	0.62	A
	REDLANDS*	CITRUS (BROOKSIDE)*	REDLANDS	2001	SIG	8	0.50	B	18	0.89	C
				2000	SIG	8	0.50	B	18	0.89	C
	SAN MATEO	BROOKSIDE*	REDLANDS	2001	SIG	8	0.49	B	12	0.78	B
				2000	SIG	8	0.49	B	12	0.78	B
	TENNESSEE*	REDLANDS*	REDLANDS	2001	SIG	16	0.61	C	19	0.73	C
				2000	SIG	16	0.61	C	19	0.73	C
	WABASH*	5TH AVE*	REDLANDS	2001	2W STOP	6		B	6		B
				2000	2W STOP	7		B	4		A
	WABASH*	CITRUS*	REDLANDS	2001	2W STOP	6		B	5		B
				2000	2W STOP	3		A	3		A

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MONITORING AGENCY	NS	EW	JURISDICTION (CITY or COUNTY)	YEAR	CONTROL TYPE	AM PK HOUR DELAY SEC	AM PK HOUR V/C	AM PK HOUR LOS	PM PEAK H R DELAY SEC	PM PEAK H R V/C	PM PEAK H R LOS
RIALTO	CEDAR*	BASE LINE*	RIALTO	2001	SIG	16	0.45	C	14	0.35	B
				2000	SIG	16	0.45	C	14	0.35	B
	CEDAR*	RIALTO	RIALTO	2001	4W STOP	12	0.47	B	15	0.55	B
				2000	4W STOP	12	0.47	B	15	0.55	B
	PEPPER*	BASE LINE*	RIALTO	2001	SIG	6	0.25	B	7	0.29	B
				2000	SIG	6	0.23	B	6	0.29	B
	RIVERSIDE*	AGUA MANSA*	RIALTO	2001	4W STOP	16	0.55	C	17	0.58	C
				2000	4W STOP	40		D	54		F
	RIVERSIDE*	BASE LINE*	RIALTO	2001	SIG	13	0.52	B	13	0.58	B
				2000	SIG	13	0.52	B	13	0.58	B
	RIVERSIDE*/BLOOM*	MERRILL*(WB)	RIALTO	2001	5W SIG	23	0.74	C	30	0.79	C
				2000	5W SIG	19	0.41	C	33	0.53	D
	RIVERSIDE*	SAN BERNARDINO	RIALTO	2001	SIG	14	0.69	B	22	0.86	C
				2000	SIG	14	0.69	B	22	0.86	C
	RIVERSIDE*	SLOVER	RIALTO	2001	SIG	8	0.44	B	8	0.62	B
				2000	SIG	8	0.44	B	8`	0.62	B
	RIVERSIDE	VALLEY	RIALTO	2001	SIG	27	0.83	C	33	0.88	C
				2000	SIG	27	0.91	D	26	0.87	D
SAN BERNARDINO	DEL ROSA AVE.	HIGHLAND AVE.	S. BERNARDINO	2001	SIG	17	0.48	C	19	0.64	C
				2000	SIG	17	0.48	C	19	0.64	C
	DEL ROSA DR.*	BASE LINE*	SB/HIGHLAND/SB CO.	2001	SIG	13	0.39	B	15	0.56	B
				2000	SIG	13	0.39	B	15	0.56	B
	DEL ROSA	S. DATE	S. BERNARDINO	2001	SIG	14	0.57	B	17	0.80	C
				2000	SIG	14	0.57	B	17	0.80	C
	E STREET*	2ND ST*	S. BERNARDINO	2001	SIG	16	0.52	C	20	0.67	C
				2000	SIG	16	0.52	C	20	0.67	C
	E STREET*	5TH ST*	S. BERNARDINO	2001	SIG	9	0.35	B	8	0.55	B
				2000	SIG	9	0.35	B	8	0.55	B
	E STREET	9TH ST	S. BERNARDINO	2001	SIG	9	0.38	B	8	0.53	B
				2000	SIG	9	0.38	B	8	0.53	B
	E STREET*	BASE LINE*	S. BERNARDINO	2001	SIG	8	0.42	B	8	0.43	B
				2000	SIG	8	0.42	B	9	0.43	B
	E STREET*	HIGHLAND*	S. BERNARDINO	2001	SIG	8	0.41	B	9	0.47	B
				2000	SIG	8	0.41	B	9	0.47	B

TABLE A-1
SAN BERNARDINO COUNTY CMP INTERSECTION LEVEL OF SERVICE

MONITORING AGENCY	NS	EW	JURISDICTION (CITY or COUNTY)	YEAR	CONTROL TYPE	AM PK HOUR DELAY SEC	AM PK HOUR V/C	AM PK HOUR LOS	PM PEAK H R DELAY SEC	PM PEAK H R V/C	PM PEAK H R LOS
SAN BERNARDINO continued	E STREET*	MILL (INLAND CNTR)*	S. BERNARDINO	2001	5WSIG	26	0.42	D	31	0.63	D
				2000	5WSIG	22	0.32	C	28	0.69	D
	E STREET*	ORANGE SHOW	S. BERNARDINO	2001	SIG	18	0.57	C	22	0.66	C
				2000	SIG	18	0.57	C	22	0.66	C
	E STREET	RIALTO AVE.	S. BERNARDINO	2001	SIG	14	0.29	B	14	0.51	B
				2000	SIG	14	0.29	B	14	0.51	B
	HUNTS LN*	REDLANDS*	S. BERNARDINO	2001	SIG	26	0.53	C	29	0.65	C
				2000	SIG	19	0.60	C	26	0.92	D
	I STREET	3RD ST	S. BERNARDINO	2001	SIG	4	0.28	A	6	0.44	B
				2000	SIG	4	0.28	A	6	0.44	B
	MT VERNON*	2ND STREET	S. BERNARDINO	2001	SIG	11	0.51	B	17	0.69	C
				2000	SIG	11	0.51	B	17	0.69	C
	MT VERNON*	BASE LINE*	S. BERNARDINO	2001	SIG	13	0.50	B	15	0.55	B
				2000	SIG	13	0.50	B	15	0.55	B
	MT VERNON*	HIGHLAND*	S. BERNARDINO	2001	SIG	14	0.62	B	15	0.68	C
				2000	SIG	14	0.62	B	15	0.68	C
	MT VERNON*	MILL*	S. BERNARDINO	2001	SIG	14	0.47	B	19	0.59	C
				2000	SIG	14	0.47	B	19	0.59	C
	MT VERNON*	RIALTO	S. BERNARDINO	2001	SIG	6	0.28	B	6	0.38	B
				2000	SIG	6	0.28	B	6	0.38	B
	PEPPER*	MILL*	S. BERNARDINO	2001	SIG	18	0.41	C	14	0.48	B
				2000	SIG	18	0.41	C	14	0.48	B
	PEPPER*	RIALTO	S. BERNARDINO	2001	SIG	11	0.27	B	12	0.44	B
				2000	SIG	11	0.27	B	12	0.44	B
	RANCHO*	MILL*	S. BERNARDINO	2001	SIG	6	0.24	B	6	0.31	B
				2000	SIG	6	0.24	B	6	0.31	B
	RANCHO*	RIALTO	S. BERNARDINO	2001	SIG	5	0.28	B	6	0.27	B
				2000	SIG	5	0.28	B	6	0.27	B
	STERLING AVE	3RD ST	S. BERNARDINO	2001	SIG	2	0.39	A	6	0.42	B
				2000	SIG	2	0.39	A	6	0.42	B
	STERLING AVE	5TH ST	S. BERNARDINO	2001	SIG	7	0..55	B	8	0.84	B
				2000	SIG	7	0.55	B	8	0.84	B
	STERLING AVE	HIGHLAND	S. BERNARDINO	2001	SIG	18	0.49	C	20	0.65	C
				2000	SIG	18	0.49	C	20	0.65	C

TABLE A-1
SAN BERNARDINO COUNTY CMP INTERSECTION LEVEL OF SERVICE

MONITORING AGENCY	NS	EW	JURISDICTION (CITY or COUNTY)	YEAR	CONTROL TYPE	AM PK HOUR DELAY SEC	AM PK HOUR V/C	AM PK HOUR LOS	PM PEAK HR DELAY SEC	PM PEAK HR V/C	PM PEAK HR LOS
SAN BERNARDINO continued	TIPPECANOE	3RD ST*	S. BERNARDINO	2001	SIG			DNS			DNS
				2000	SIG			DNS			DNS
	TIPPECANOE*	MILL*	S. BERNARDINO	2001	SIG	10	0.66	B	10	0.67	B
				2000	SIG	10	0.66	B	10	0.67	B
	TIPPECANOE*	SAN BERNARDINO*	S. BERNARDINO	2001	SIG	17	0.69	C	22	0.75	C
				2000	SIG	17	0.69	C	20	0.75	C
	VICTORIA*	3RD ST*	S. BERNARDINO	2001	SIG			DNS			DNS
				2000	SIG			DNS			DNS
	WATERMAN*	2ND ST*	S. BERNARDINO	2001	SIG	5	0.31	B	7	0.34	B
				2000	SIG	5	0.31	B	7	0.34	B
	WATERMAN*	3RD ST*	S. BERNARDINO	2001	SIG	13	0.43	B	16	0.61	C
				2000	SIG	13	0.43	B	16	0.61	C
	WATERMAN*	5TH ST*	S. BERNARDINO	2001	SIG	13	0.49	B	14	0.56	B
				2000	SIG	13	0.49	B	14	0.56	B
	WATERMAN	9TH ST	S. BERNARDINO	2001	SIG	16	0.62	C	18	0.63	C
				2000	SIG	16	0.62	C	18	0.63	C
	WATERMAN*	BARTON*	S. BERNARDINO/COLTON	2001	SIG	17	0.75	C	15	0.76	B
				2000	SIG	17	0.75	C	15	0.76	B
	WATERMAN*	BASE LINE*	S. BERNARDINO	2001	SIG	32	0.66	C	42	0.88	D
				2000	SIG	20	0.66	C	33	0.95	D
	WATERMAN*	HIGHLAND*	S. BERNARDINO	2001	SIG	19	0.57	C	20	0.59	C
				2000	SIG	19	0.57	C	20	0.59	C
	WATERMAN*	HOSPITALITY LN	S. BERNARDINO	2001	SIG	25	0.42	C	51	0.94	D
				2000	SIG	26	0.76	D	30	0.90	D
	WATERMAN*	MILL*	S. BERNARDINO	2001	SIG	17	0.59	C	20	0.65	C
				2000	SIG	17	0.59	C	20	0.65	C
	WATERMAN*	REDLANDS*	S. BERNARDINO	2001	SIG	19	0.62	C	16	0.67	C
				2000	SIG	19	0.62	C	16	0.67	C
SB COUNTY	ALABAMA*	SAN BERNARDINO*	SB COUNTY	2001	SIG	EXEMPT - CONSTRUCTION AREA					
				2000	SIG	21	0.40	C	25	0.59	C
	ALDER*	VALLEY	SB COUNTY	2001	SIG	11	0.54	B	11	0.60	B
				2000	SIG	11	0.51	B	23	0.87	C

TABLE A-1
SAN BERNARDINO COUNTY CMP INTERSECTION LEVEL OF SERVICE

MONITORING AGENCY	NS	EW	JURISDICTION (CITY or COUNTY)	YEAR	CONTROL TYPE	AM PK HOUR DELAY SEC	AM PK HOUR V/C	AM PK HOUR LOS	PM PEAK H R DELAY SEC	PM PEAK H R V/C	PM PEAK H R LOS
SB COUNTY cont'd	CEDAR*	BLOOMINGTON*	SB COUNTY	2001	SIG	13	0.40	B	19	0.80	B
				2000	SIG	12	0.46	B	10	0.47	B
	CEDAR*	SAN BERNARDINO	SB COUNTY	2001	SIG	20	0.45	B	23	0.43	C
				2000	SIG	18	0.37	B	18	0.50	B
	CEDAR*	SLOVER	SB COUNTY	2001	SIG	24	0.65	C	32	0.70	C
				2000	SIG	23	0.46	C	23	0.74	C
	CEDAR*	VALLEY	SB COUNTY	2001	SIG	EXEMPT - CONSTRUCTION AREA					
				2000	SIG	39	0.94	D	44	0.95	D
	CENTRAL*	MISSION*	SB COUNTY	2001	SIG	23	0.76	C	24	0.79	C
				2000	SIG	23	0.69	C	35	0.92	D
	CHERRY*	ARROW	SB COUNTY	2001	SIG	18	0.79	B	22	0.86	C
				2000	SIG	20	0.73	B	47	0.98	D
	CHERRY*	JURUPA*	FONTANA	2001	SIG	16	0.63	B	13	0.35	B
				2000	SIG	12	0.27	B	13	0.37	B
	CHERRY*	SAN BERNARDINO	SB COUNTY	2001	SIG	16	0.53	B	22	0.69	C
				2000	SIG	22	0.69	C	12	0.37	B
	CITRUS*	VALLEY	SB COUNTY/FONTANA	2001	SIG	EXEMPT - CONSTRUCTION AREA					
				2000	SIG	29	0.61	C	56	0.97	E
	ETIWANDA	SAN BERNARDINO	SB COUNTY	2001	SIG	16	0.58	B	19	0.69	B
				2000	SIG	20	0.65	B	16	0.56	B
TWNTYNINE PALMS	ALL STATE HIGHWAYS/	SEE CALTRANS									
UPLAND	MOUNTAIN*	7TH ST	UPLAND	2001	SIG	20	0.51	C	28	0.74	C
				2000	SIG	20	0.51	C	28	0.74	C
	MOUNTAIN*	8TH ST (ARROW HWY)*	UPLAND	2001	SIG	21	0.46	C	24	0.65	C
				2000	SIG	21	0.46	C	24	0.65	C
VICTORVILLE	AMARGOSA	BEAR VALLEY	VICTORVILLE	2001	SIG			DNS			F**
				2000	SIG			DNS	68	0.90	E
	BEAR VALLEY	HESPERIA	VICTORVILLE/HESPER	2001	SIG			DNS	42	0.84	D
				2000	SIG	21	0.67	C	32	$0.95	D
	BEAR VALLEY	MARIPOSA	VICTORVILLE/HESPER	2001	SIG			DNS			F**
				2000	SIG			DNS			F**
	PALMDALE	MARIPOSA	VICTORVILLE	2001				DNS	29	0.87	C
				2000				DNS			DNS

TABLE A-1

SAN BERNARDINO COUNTY CMP INTERSECTION LEVEL OF SERVICE

MONITORING AGENCY	NS	EW	JURISDICTION (CITY or COUNTY)	YEAR	CONTROL TYPE	AM PK HOUR DELAY SEC	AM PK HOUR V/C	AM PK HOUR LOS	PM PEAK HR DELAY SEC	PM PEAK HR V/C	PM PEAK HR LOS
YUCAIPA	14TH STREET*	YUCAIPA BLVD*	YUCAIPA	2001	SIG	11	0.62	B	13	0.69	B
				2000	SIG	10	0.66	B	8	0.60	B
	BRYANT*	AVE F*	YUCAIPA	2001	4W STOP	8		B	5		A
				2000	4W STOP	7		B	5		A
	BRYANT*	COUNTY LINE RD*	YUCAIPA	2001	4W STOP	5		A	3		A
				2000	4W STOP	5		A	4		A
	BRYANT*	OAK GLEN RD*	YUCAIPA	2001	SIG	16	0.55	C	14	0.37	B
				2000	SIG	16	0.55	C	14	0.37	B
	BRYANT*	YUCAIPA BLVD*	YUCAIPA	2001	SIG	10	0.43	B	11	0.46	B
				2000	SIG	11	0.36	B	12	0.41	B
	OAK GLEN ROAD*	YUCAIPA BLVD*	YUCAIPA	2001	SIG	19	0.87	C	15	0.58	C
				2000	SIG	18	0.88	C	22	0.90	C
YUCCA VALLEY	ALL STATE HIGHWAYS/	SEE CALTRANS									

NOTES: * IDENTIFIES A CMP ROADWAY.
**IDENTIFIES LOS F CONDITION (WITHOUT DELAY OF 60 OR MORE SECONDS) BUT WITH V/C OF 1.00 OR GREATER OR CYCLE LENGTH OVER 130 SECONDS.
"MONITORING AGENCY" COLUMN: IDENTIFIES AGENCY RESPONSIBLE FOR MONITORING LOS LEVELS.
(SORTED BY AGENCY IN ASCENDING ORDER & PM LEVELS OF SERVICE IN DESCENDING ORDER).
"LOS CAPSSI" COLUMN: LEVEL OF SERVICE DETERMINED BY THE "COMPREHENSIVE ANALYSIS PROGRAM FOR A SINGLE SIGNALIZED INTERSECTION" (CAPSSI) COMPUTER PROGRAM
"DNS" = DATA NOT SUBMITTED
"NPH" = NO PEAK HOUR.

Table A-2

GENERALIZED PEAK HOUR/PEAK DIRECTION LEVEL OF SERVICE MAXIMUM VOLUMES FOR FLORIDA'S RURAL (<5,000) AREAS

UNDEVELOPED ARES AND FREEWAYS

FREEWAYS

LANES	Level of Service				
	A	B	C	D	E
4	1,260	1,950	2,780	3,360	3,610
6	1,900	2,920	4,170	5,040	5,420
8	2,530	3,900	5,560	6,710	7,220

MULTILANE UNINTERRUPTED HIGHWAYS

(less than 1 signalized intersection every 4 miles)

LANES	Level of Service				
	A	B	C	D	E
	1,160	1,690	2,280	2,810	3,520
	1,740	2,530	3,430	4,220	5,270

TWO-LANE UNINTERRUPTED HIGHWAYS

(less than 1 signalized intersection every 4 miles)

55 MPH Posted Speed

Lanes	Level of Service				
	A	B	C	D	E
2	170	330	540	870	1,400

45 MPH Posted Speed

Lanes	Level of Service				
	A**	B	C	D	E
2	-	160	430	710	1,340

INCORPORATED AND DEVELOPED AREAS

(cities, developed but unincorporated areas or roadways influenced by signalized intersections)

TWO-WAY ARTERIALS

Group A (cities or developed areas with no signalized intersections, or roadways with 0.25 to 0.75 signalized intersections per mile**)**

Lanes/ Divided	Level of Service				
	A**	B**	C	D	E
2 Undiv.	-	-	450	650	870
4 Undiv. -	-	-	1,440	1,580	1,750
4 Div.	-	-	1,520	1,680	1,840
6 Div.	-	-	2,500	2,500	2,770

Group B (0.76 to 1.5 signalized intersections per mile)

Lanes/ Divided	Level of Service				
	A**	B**	C	D	E
2 Undiv.	-	-	410	610	820
4 Undiv.	-	-	1,570	1,520	1,650
4 Div.	-	-	1,440	1,500	1,740
6 Div.	-	-	2,210	2,410	2,620

Group C (more than 1.5 signalized intersections per mile)

Lanes/ Divided	Level of Service				
	A**	B**	C**	D	E
2 Undiv.	-	-	-	600	800
4 Undiv.	-	-	-	1,470	1,540
4 Div.	-	-	-	1,550	1,720
6 Div.	-	-	-	2,370	2,500

COLLECTORS AND LOCAL STREETS

(signalized intersection analysis)

Lanes	Level of Service				
	A**	B**	C	D	E
2	-	-	350	550	620

*The table does not constitute a standard and should be used only for general planning applications. The computer models from which this table is derived should be used for more specific planning applications. The table and deriving computer models should not be used for corridor or intersection design, where more refined techniques exist. Values shown are average daily traffic maximum volumes (based on peak hour volumes) for levels of service and are based on the 1985 Highway Capacity Manual and Florida traffic data. Roadways with more than the number of lanes shown should be treated on a case by case basis. The table's input value assumptions and level of service criteria appear on the back.

**Cannot be achieved.

Source: Florida Department of Transportation, 1985.

TABLE A-2 continued

GENERALIZED PEAK HOUR/PEAK DIRECTION LEVEL OF SERVICE MAXIMUM VOLUMES FOR FLORIDA'S URBAN/URBANIZED (5,000+) AREAS

(valid for use from January 1989 through December 1990)

TWO-WAY ARTERIALS

Group A (0.0 to 0.75 signalized intersections per mile)

Lanes/Divided	A	B	C	D	E
2 Undiv.	740	810	840	890	940
4 Div.	1,620	1,730	1,790	1,890	1,990
6 Div.	2,460	2,610	2,690	2,840	2,990

Group B (0.76 to 1.5 signalized intersections per mile)

Lanes/Divided	A	B	C	D	E
2 Undiv.	490	740	790	830	870
4 Div.	1,080	1,610	1,680	1,760	1,850
6 Div.	1,680	2,450	2,530	2,650	2,770

Group C (1.6 to 2.5 signalized intersections per mile)

Lanes/Divided	A**	B	C	D	E
2 Undiv.	-	550	730	800	850
4 Div.	-	1,240	1,600	1,720	1,810
6 Div.	-	1,910	2,440	2,600	2,730

Group D (2.6 to 3.5 signalized intersections per mile)

Lanes/Divided	A**	B**	C	D	E
2 Undiv.	-	-	500	740	830
4 Div.	-	-	1,090	1,640	1,800
6 Div.	-	-	1,680	2,510	2,720

Group E (3.6 to 4.5 signalized intersections per mile)

Lanes/Divided	A**	B**	C**	D	E
2 Undiv.	-	-	-	670	790
4 Div.	-	-	-	1,430	1,740
6 Div.	-	-	-	2,140	2,650

Group F (more than 4.5 signalized intersections per mile and not within primary city central business district of urbanized area over 500,000)

Lanes/Divided	A**	B**	C**	D	E
2 Undiv.	-	-	-	560	790
4 Div.	-	-	-	1,230	1,740
6 Div.	-	-	-	1,890	2,660

Group G (more than 4.5 signalized intersections per mile and within primary city central business district of urbanized area over 500,000)

Lanes/Divided	A**	B**	C**	D	E
2 Undiv.	-	-	-	710	840
4 Div.	-	-	-	1,590	1,830
6 Div.	-	-	-	2,450	2,780

DIVIDED/UNDIVIDED ADJUSTMENTS

(alter corresponding two-way arterial volume indicated percent)

Lanes	Median	Left Turn Bays	Adjustment Factor
2	Divided	Yes	+ 5%
2	Undivided	No	-15%
Multi	Undivided	Yes	-5%
Multi	Undivided	No	-20%

FREEWAYS

Group 1 (within urbanized area over 500,000 and leading to or within 5 miles of primary city central business district)

Lanes	A	B	C	D	E
4	1,400	2,150	3,070	3,710	3,990
6	2,090	3,230	4,610	5,570	5,990
8	2,790	4,310	6,140	7,420	7,980
10	3,490	5,390	7,680	9,280	9,980

Group 2 (within urbanized area over 50,000 and not in Group 1)

Lanes	A	B	C	D	E
4	1,330	2,050	2,930	3,530	3,800
6	2,000	3,080	4,390	5,300	5,700
8	2,660	4,100	5,850	7,070	7,600
10	3,330	5,130	7,320	8,840	9,500

Group 3 (within non-urbanized areas)

Lanes	A	B	C	D	E
4	1,260	1,950	2,780	3,360	3,610
6	1,900	2,920	4,170	5,040	5,420
8	2,530	3,900	5,560	6,710	7,220

ONE-WAY ARTERIALS

Group D (less than 3.6 signalized intersections per mile)

Lanes	A**	B	C	D	E
2	-	1,060	1,600	1,830	1,950
3		1,610	2,450	2,770	2,940
4		2,150	3,320	3,710	3,930

Group E (3.6 to 4.5 signalized intersections per mile)

Lanes	A**	B**	C	D	E
2	-	-	1,440	1,750	1,900
3	-	-	2,190	2,670	2,870
4	-	-	2,920	3,600	3,850

Group F (more than 4.5 signalized intersections per mile and not within primary city central business district of urbanized area over 500,000)

Lanes	A**	B**	C	D	E
2	-	-	1,180	1,680	1,910
3	-	-	1,790	2,590	2,890
4	-	-	2,410	3,500	3,870

Group G (more than 4.5 signalized intersections per mile and within primary city central business district of urbanized area over 500,000)

Lanes	A**	B**	C	D	E
2	-	-	1,440	1,860	1,980
3	-	-	2,210	2,830	2,990
4	-	-	2,980	3,800	4,000

TWO-WAY COLLECTORS AND LOCAL STREETS

(signalized intersection analysis)

Lanes	A**	B**	C	D	E
2	-	-	410	630	700
4	-	-	880	1,320	1,430
6	-	-	1,350	2,020	2,170

*The table does not constitute a standard and should be used only for general planning applications. The computer models from which this table is derived should be used for more specific planning applications. The table and deriving computer models should not be used for corridor or intersection design, where more refined techniques exist. Values shown are average daily traffic maximum volumes (based on peak hour volumes) for levels of service and are based on the 1985 Highway Capacity Manual and Florida traffic data. Roadways with more than the number of lanes shown should be treated on a case by case basis. The table's input value assumptions and level of service criteria appear on the back.

**Cannot be achieved.

Source: Florida Department of Transportation, 1988.

Table A-3
COUNTY OF SAN BERNARDINO CMP ROADWAY SYSTEM

East-West Arterial (Valley)	Beginning	Ending
16th St.- Base Line Rd.- Base Line St.	Los Angeles County Line	Boulder Ave.
19th St.	Mountain Ave.	Haven Ave.
2nd St.	I-215	Waterman Ave.
3rd St.	Waterman Ave.	Alabama St.
40th St.	Kendall Dr.	Waterman Ave.
4th St.	I-10	Etiwanda Ave.
5th Ave.- Sand Canyon Rd.	Wabash Ave.	Yucaipa Blvd.
Agua Mansa Rd.	Riverside Ave.	Rancho Ave.
Arrow Hwy.-8th St.	Los Angeles County Line	Mountain Ave.
Arrow Rte.	Grove Ave.	Milliken Ave.
Barton Rd.- Washington St.- BrooKside Ave.- Citrus Ave.	La Cadena Dr.	Wabash Ave.
Bloomington Ave.	Cedar Ave.	Riverside Ave.
Carbon Canyon Rd.- Chino Hills Pkwy.	Orange County Line	Central Ave.
Colorado St.	Oak Glen Rd.	Wildwood Canyon Rd.
Colton Ave.- Inland Center Dr.	Mt. Vernon Ave.	E St.
Edison Ave.	SR-71	Euclid Ave.
Foothill Blvd.- 5th St.- Greenspot Rd.- Florida St.	Los Angeles County Line	Garnet St.
Grand Ave.	Los Angeles County Line	SR-71
Highland Ave.	Haven Ave.	SR-330
Holt Blvd.	Los Angeles County Line	I-10
Jurupa St.- Jurupa Ave.	I-15	Sierra Ave.
Live Oak Canyon Rd.	Riverside County Line	I-10
Lugonia Ave.- Mentone Blvd.- Mill Creek Rd.	Orange St.	Bryant St.
Merrill Ave.- Mill St.	Riverside Ave.	Tippecanoe Ave.
Mission Blvd.	Los Angeles County Line	Riverside County Line
Oak Glen Rd.	I-10	Bryant St.
Redlands Blvd.	Hunts Ln.	I-10
Riverside Dr.	SR-71	Euclid Ave.
San Bernardino Ave.	Tippecanoe Ave.	Orange St.
Washington St.	Mt. Vernon Ave.	Barton Rd.
Wildwood Canyon Rd.	Colorado St.	Bryant St.
Yucaipa Blvd.	I-10	Bryant St.

North-South Arterial (Valley)	Beginning	Ending
14th St.	Yucaipa Blvd.	Oak Glen Rd.
Alabama St.	San Bernardino Ave.	Barton Rd.
Alder Ave.	Base Line Rd.	I-10
Archibald Ave.	SR-60	Riverside County Line
Archibald Ave.	19th St.	I-10
Bryant St.	Mill Creek Rd.	Riverside County Line
Cajon Blvd.	I-215	Mt. Vernon Ave.
California St.- San Timoteo Canyon Rd.	San Bernardino Ave.	Riverside County Line
Cedar Ave.	Baseline Rd.	Riverside County Line
Central Ave.	Foothill Blvd.	SR-71
Cherry Ave.	I-15	Jurupa Ave.
Citrus Ave.	I-15	Jurupa Ave.
Del Rosa Dr.- Del Rosa Ave.	SR-30	3rd St.
E St.	Kendall Dr.	Hunts Ln.
Etiwanda Ave.	4th St.	Riverside County Line
Euclid Ave.	19th St.	SR-71

Table A-3
COUNTY OF SAN BERNARDINO CMP ROADWAY SYSTEM

North-South Arterial (Valley)	Beginning	Ending
Garnet St.	Florida St.	Mill Creek Rd.
Grove Ave.	Arrow Rte.	4th St.
Haven Ave.	Highland Ave.	I-10
Hunts Ln.	E St.	Washington St.
Kendall Rd.	I-215	E St.
La Cadena Dr.	Rancho Ave.	Riverside County Line
Milliken Ave.	Highland Ave.	I-10
Monte Vista Ave.	Foothill Blvd.	I-10
Mountain Ave.	19th St.	Edison Ave.
Mountain View Ave.	San Bernardino Ave.	Barton Rd.
Mt. Vernon Ave.	I-215	Washington St.
Mt. Vernon Ave.	Highland Ave.	Washington St.
Mulberry Ave.	Jurupa Ave.	Riverside County Line
Orange St.- Boulder Ave.	Highland Ave.	Citrus Ave.
Palm Ave.	Highland Ave.	3rd St.
Pepper Ave.	Baseline Rd.	I-10
Rancho Ave.	Foothill Blvd.	La Cadena Dr.
Reche Canyon Rd.	Washington St.	Riverside County Line
Riverside Ave.	Sierra Ave.	Riverside County Line
Sierra Ave.	I-15	Riverside County Line
Tippecanoe Ave.- Anderson St.	Mill St.	Redlands Blvd.
Victoria Ave.	Highland Ave.	3rd St.
Wabash Ave.	Lugonia Ave.	I-10
Waterman Ave.	40th St.	Washington St.

Arterial (Victor Valley)	Beginning	Ending
Arrowhead Lake Rd.	SR-173	Main St.
Bear Valley Rd.	I-15	SR-18
El Mirage Rd.	Los Angeles County Line	US-395
Hesperia Rd.	Main St.	Bear Valley Rd.
Main St.	I-15	Arrowhead Lake Rd.
Palmdale Rd.	Los Angeles County Line	I-15
Phelan Rd.	SR-138	US-395
Sheep Creek Rd.	SR-138	El Mirage Rd.
SR-18	I-15	Bear Valley Rd.
US-395	I-15	El Mirage Rd.

Arterial (Barstow)	Beginning	Ending
Barstow	Main St.	SR-18
Main St.	I-40	I-15
Old Highway 58	I-15	SR-58

Arterial (Needles)	Beginning	Ending
Needles Highway	Nevada State Line	I-40

Two-lane and Multi-lane Highways (Suburban &

Table A-3
COUNTY OF SAN BERNARDINO CMP ROADWAY SYSTEM

Rural)
SR-127
SR-138
SR-173
SR-18
SR-189
SR-2
SR-247
SR-330
SR-38
SR-58
SR-62
SR-83
US-395
US-95
Freeways (San Bernardino County)
I-10
I-15
I-215
I-40
SR-178
SR-30/210
SR-60
SR-71

TABLE A-4

SAN BERNARDINO COUNTY CMP

SEGMENT
LEVEL OF SERVICE

Table A-4
SAN BERNARDINO COUNTY CMP SEGMENT LEVEL OF SERVICE

**These segment to be replaced in 2002 by intersection traffic signal and/or 4-way stop analysis*
***Travel*
DNS = Data Not Submitted

Jurisdiction	On	Between	Distance	Number of Signals	Number of Sig/Mile	Number of Lanes (TW)	AM Volume	PEAK LOS	PM Volume	PEAK LOS
North-South										
*Chino	Central	Chino Hills & Riverside	2.50	4	1.60	4	DNS	DNS	DNS	DNS
*Upland/SB County	Central	Arrow & Foothill	0.90	2	2.20	4	1106	A	1363	B
*Chino/Ontario	Mountain	SR-60 & Mission	2.08	5	2.40	4	893	B	1034	B
*Ontario	Mountain	Mission & Holt	0.23	1	4.35	4	1062	D	1294	D
*Ontario	Mountain	Holt & 4th	1.00	5	5.00	4	935	D	1578	E
*Ontario/Upland	Mountain	4th & 8th	1.00	5	9.00	4	785	E	1553	E
*Upland	Mountain	8th & Foothill	1.00	2	2.00	4	NB=B		NB=D	
							SB = B		SB=B	
*Upland	Mountain	Foothill & 16th	1.00	4	4.00	4	NB = A		NB = C	
							SB = B		SB = C	
*Caltrans	Mountain (SR-30)	16th & 19th	0.75	3	4.00	4	DNS	DNS	DNS	DNS
Caltrans	Euclid (SR-83)	SR-71 & Edison	4.75	2	0.42	2-4	DNS	DNS	DNS	DNS
*Caltrans	Euclid (SR-83)	Edison & Riverside	1.48	3	2.03	4	DNS	DNS	DNS	DNS
*Caltrans	Euclid (SR-83)	Riverside&SR-60 EB Ramp	0.72	2	2.78	4	DNS	DNS	DNS	DNS
*Caltrans	Euclid (SR-83)	SR-60 EB Ramp & Mission	1.60	4	2.50	4	DNS	DNS	DNS	DNS
*Rancho Cucamonga	Archibald	Base Line & 19th	0.75	1	1.34	4	792	A	900	A
*Rancho Cucamonga	Haven	Base Line & 19th	0.73	2	2.73	5	872	C	1330	C
*Ontario	Milliken	I-10 & 4th	0.76	1	1.32	6	929	A	1567	A
*Rancho Cucamonga	Milliken	Foothill & Base Line	1.04	3	2.88	6	1064	C	1116	C
*Rancho Cucamonga	Milliken	Base Line & Highland	0.99	4	4.04	6	DNS	DNS	DNS	DNS
*Ontario	Etiwanda	SCL & I-10	2.31	4	1.73	4	800	B	927	B
*SB County	Cedar	Jurupa & Slover	1.00	1	1.00	4	620	A	770	A
*SB County	Cedar	Slover & Valley	0.50	3	6.00	4	1739	E	2182	F
*SB County/Rialto	Cedar	San Bernardino & Merrill	1.05	1	0.95	2	DNS	DNS	DNS	DNS
*Rialto	Cedar	Merrill & Rialto	0.50	1	2.00	2	DNS	DNS	DNS	DNS
*Rialto	Cedar	Rialto & Foothill	0.50	1	2.00	2	DNS	DNS	DNS	DNS
*Rialto	Cedar	Foothill & Base Line	1.00	2	2.00	2	DNS	DNS	DNS	DNS
*Rialto	Ayala	Base Line & Highland	1.05	2	1.90	2	180	A	158	A

Table A-4
SAN BERNARDINO COUNTY CMP SEGMENT LEVEL OF SERVICE

**These segment to be replaced in 2002 by intersection traffic signal and/or 4-way stop analysis*
***Travel*
DNS = Data Not Submitted

Jurisdiction	On	Between	Distance	Number of Signals	Number of Sig/Mile	Number of Lanes (TW)	AM Volume	PEAK LOS	PM Volume	PEAK LOS
*Rialto	Riverside	Jurupa & Slover	1.05	3	2.86	4	695	C	806	C
*Rialto	Riverside	San Bernardino & Mill	1.00	2	2.00	4	966	B	1300	C
*Rialto	Riverside	Merrill/Mill & Rialto	0.40	1	2.50	4	618	B	875	B
*Rialto	Riverside	Rialto & Foothill	0.60	2	3.33	4	630	C	842	C
*Rialto	Riverside	Foothill & Base Line	1.00	2	2.00	4	642	B	822	B
*Rialto	Riverside	Baseline & Highland	1.00	2	2.00	4	684	B	809	B
*Rialto	Riverside	Highland & Sierra	4.05	3	0.74	4	649	A	469	A
*SB City	Pepper	Mill & Rialto	0.50	1	2.00	4	764	B	760	B
*SBCity/Rialto	Pepper	Rialto & Foothill	0.50	1	2.00	4	654	B	684	B
*SB City	Mt. Vernon	Mill & Rialto	0.60	2	3.33	4	568	C	625	C
*SB City	Mt. Vernon	Baseline & Highland	1.01	2	1.98	4	329	B	618	B
*Colton	Mt. Vernon	Washington & Colton	1.85	5	2.70	4	334	C	731	C
*Colton/SB City	Mt. Vernon	Colton & Mill	1.30	3	2.31	4	486	B	584	B
*Colton/SB City	Hunts Ln	Barton & Redlands	0.83	2	2.41	2	621	C	745	D
*SB City	Hunts Ln & E	Redlands & Mill	2.27	6	2.64	4	640	C	998	C
*SB City	"E" Street	Mill & Rialto	0.60	1	1.67	4	317	A	741	A
*SB City	"E" Street	Baseline & Highland	1.00	3	3.00	4	564	C	621	C
*SB City	W#aterman	Barton & Redlands	1.00	4	4.00	4	1000	D	969	D
*SB City	Waterman	Redlands & Mill	2.05	4	1.95	4	1180	C	1410	C
*SB City	Waterman	3rd & 5th	0.24	2	8.33	6	828	D	1210	D
*SB City	Waterman	Baseline & Highland	1.00	3	3.00	4	939	C	1186	D
*SB City	Tippecanoe	San Bernardino & Mill	1.00	1	1.00	4	847	A	1070	B
*Redlands	Alabama	Barton & Redlands	1.00	4	1.00	4	DNS	DNS	DNS	DNS
SB County/Rdl/Hglnd	Alabama/Palm	San Bernardino & 3rd	2.07	1	0.48	4	295	A	330	A
*Highland	Palm	5th & Baseline	0.90	1	1.11	4	981	A	961	A
*Highland/SB City	Palm	Baseline & Highland	1.01	3	2.97	4	603	C	704	C
Yucaipa/SB County	Bryant	Yucaipa & Rt. 38	3.54	1	0.28	2	322	B	330	B
SB City/SB County	Cajon Blvd.	Highland & I-215	6.80	0	0.00	2	385	A	392	A
*Highland/SB City	Del Rosa Drive	5th & Baseline	0.95	3	3.16	2	188	C	634	C
*SB City/Highland	Sterling Avenue	5th & Baseline	0.93	2	2.15	4	350	A	517	A
*Highland/SB City	Sterling Avenue	Baseline & Highland	1.00	2	2.00	4	437	A	623	A

Table A-4
SAN BERNARDINO COUNTY CMP SEGMENT LEVEL OF SERVICE

**These segment to be replaced in 2002 by intersection traffic signal and/or 4-way stop analysis*
***Travel*
DNS = Data Not Submitted

Jurisdiction	On	Between	Distance	Number of Signals	Number of Sig/Mile	Number of Lanes (TW)	AM Volume	PEAK LOS	PM Volume	PEAK LOS
Hghlnd/SB County/Rdl	Green Spot/ Florida/ Garnet	Boulder & SR-38	6.74	1	0.15	2	DNS	DNS	DNS	DNS
East-West										
*Caltrans	19th (SR-30)	Mountain & Euclid	1.10	0	0.00	2	DNS	DNS	DNS	DNS
*Caltrans	19th (SR-30)	Euclid & Archibald	3.18	4	1.26	2	DNS	DNS	DNS	DNS
*Caltrans	19th (SR-30)	Archibald & Haven	1.18	1	0.85	4	DNS	DNS	DNS	DNS
*Caltrans	Highland (SR-30)	Haven & Milliken	1.00	1	1.00	2	DNS	DNS	DNS	DNS
*Caltrans	Highland (SR-30)	Milliken & Etiwanda	1.93	2	1.04	2	DNS	DNS	DNS	DNS
Caltrans	Highland (SR-30)	Etiwanda & Cherry	2.01	1	0.50	2	DNS	DNS	DNS	DNS
Caltrans	Highland (SR-30)	Cherry & Citrus	2.04	0	0.00	2	DNS	DNS	DNS	DNS
*Caltrans	Highland (SR-30)	Citrus & Sierra	1.00	1	0.33	2	DNS	DNS	DNS	DNS
Caltrans	Highland (SR-30)	Sierra & Cedar (Ayala)	2.25	0	0.00	2	DNS	DNS	DNS	DNS
*Caltrans	Highland (SR-30)	Cedar (Ayala) & Riverside	1.50	1	0.27	2	DNS	DNS	DNS	DNS
Caltrans	Highland (SR-30)	Riverside & Mt. Vernon	2.95	7	2.37	4	DNS	DNS	DNS	DNS
*Caltrans	Highland (SR-30)	SR 30 (EB Ramp)&Boulder	2.30	6	2.61	4	DNS	DNS	DNS	DNS
*SB City	Highland	Mt. Vernon & E Street	1.10	7	6.36	4	686	D	1056	D
*Caltrans	16th (SR-30)	SB Cnty Line & Mountain					DNS	DNS	DNS	DNS
*Upland	16th	Mountain & Euclid	1.10	2	1.80	4	EB = B* WB = B**		EB = C** WB = C**	
*Upland	16th	Euclid & Carnelian	2.00	7	3.50	4	EB = A** WB = B**		EB = B** WB = A**	
*Rancho Cucamonga	Base Line	Milliken & Etiwanda	1.96	3	1.53	4	1081	B	1101	B
*Rancho Cucamonga	Base Line	Etiwanda & ECL	0.49	1	2.93	4	966	B	996	B
*Rialto	Base Line	Cedar & Riverside	1.50	4	2.67	4	524	C	636	C
*Rialto	Base Line	Riverside & Pepper	1.00	4	4.00	4	825	C	692	C
*Rialto/SB City	Base Line	Pepper & Mt. Vernon	2.10	3	1.43	4	624	A	996	A
*SB City/Highland	Base Line	Waterman & Sterling	1.99	6	3.02	4	528	C	926	C
*Highland	Base Line	Sterling & Palm	2.03	6	2.86	4	424	A	586	A
*Highland	Base Line	Palm & Boulder	0.78	2	2.56	4	401	A	596	A
*Caltrans	Foothill (SR-66)	Archibald & Haven	1.18	2	1.69	4	DNS	DNS	DNS	DNS

Table A-4
SAN BERNARDINO COUNTY CMP SEGMENT LEVEL OF SERVICE

**These segment to be replaced in 2002 by intersection traffic signal and/or 4-way stop analysis*
***Travel*
DNS = Data Not Submitted

Jurisdiction	On	Between	Distance	Number of Signals	Number of Sig/Mile	Number of Lanes (TW)	AM Volume	PEAK LOS	PM Volume	PEAK LOS
*Caltrans	Foothill (SR-66)	Etiwanda & Cherry	2.00	2	1.00	4	DNS	DNS	DNS	DNS
Caltrans	Foothill (SR-66)	Cherry & Citrus	2.03	1	0.09	4	DNS	DNS	DNS	DNS
*Caltrans	Foothill (SR-66)	Citrus & Sierra	1.01	2	1.98	4	DNS	DNS	DNS	DNS
*Caltrans	Foothill (SR-66)	Cedar & Riverside	1.50	4	2.66	4	DNS	DNS	DNS	DNS
*Caltrans	Foothill (SR-66)	Pepper & Mt. Vernon	2.10	6	2.86	4	DNS	DNS	DNS	DNS
*SB City/SB Co./ Highland.	5th Street	Waterman & Del Rosa	1.50	2	1.33	4	460	A	832	A
*Highland/SB City	5th Street	Del Rosa & Sterling	0.45	1	2.22	4	475	B	505	B
Highland/SB City	5th Street	Sterling & Palm	4.02	2	0.49	4	395	A	452	A
*Highland	5th Street	Palm & Boulder	0.78	3	3.80	4	474	C	435	C
*Upland	8th	Central & Mountain	1.10	2	1.83	4-2	EB = B WB = C		EB = C WB = B	
*Rancho Cucamonga	Arrow	Grove & Baker	0.49	1	2.04	2	DNS	DNS	DNS	DNS
*Rancho Cucamonga	Arrow	Baker & Vineyard	0.49	1	2.04	4	550	A	971	A
*Rancho Cucamonga	Arrow	Vineyard & Archibald	1.00	2	2.04	4	806	B	1086	B
*Rancho Cucamonga	Arrow	Archibald & Haven	0.48	2	2.04	4	692	B	1048	B
*Rancho Cucamonga	Arrow	Haven & Milliken	1.14	2	1.75	4	802	B	981	B
*Ontario/Rancho Cucamonga	4th	Vineyard & Archibald	1.00	1	1.00	4	607	A	685	A
*Ontario/R. Cucamonga	4th	Archibald & Haven	1.00	2	2.00	4	510	A	907	A
*Ontario/R. Cucamonga	4th	Haven & Milliken	1.00	1	1.00	4	443	A	686	A
*Ontario/R. Cucamonga	4th	Milliken & Etiwanda	1.98	1	0.51	4	438	A	557	A
*SB City	San Bernardino	Tippecanoe & Mt. View	0.90	1	1.11	4	535	A	423	A
*Redlands	San Bernardino	Mt. View & California	1.00	0	0.00	2	DNS	DNS	DNS	DNS
*SB Co.	San Bernardino	California & Alabama	0.95	0	0.00	2	341	A	354	A
*SB Co./Redlands	San Bernardino	Alabama & SR-30	0.50	1	2.00	2	244	B	339	B
*Redlands	San Bernardino	SR-30 & Orange	1.00	1	2.00	2	DNS	DNS	DNS	DNS
*Ontario	Holt	WCL & Mountain	1.16	1	0.86	4	921	A	1164	B
*Ontario	Holt	Grove & Vineyard	1.00	1	1.00	4	940	A	1534	C
*Ontario	Holt	Vineyard & Guasti	0.30	1	3.33	4	986	C	921	C
*San Bernardino County	Mission	Central & Benson	0.50	1	2.00	4	1230	B	1440	B

Table A-4
SAN BERNARDINO COUNTY CMP SEGMENT LEVEL OF SERVICE

**These segment to be replaced in 2002 by intersection traffic signal and/or 4-way stop analysis*
***Travel*
DNS = Data Not Submitted

Jurisdiction	On	Between	Distance	Number of Signals	Number of Sig/Mile	Number of Lanes (TW)	AM Volume	PEAK LOS	PM Volume	PEAK LOS
*Ontario	Mission	WCL & Mountain	1.16	1	0.86	4	817	C	1013	C
*Ontario	Mission	Euclid & Grove	1.33	4	3.01	4	752	C	934	C
*Ontario	Mission	Grove & Vineyard	1.10	1	0.91	4	1156	B	1169	B
*Ontario	Mission	Vineyard & Archibald	1.10	1	0.91	4	1119	B	1102	B
Ontario	Mission	Archibald & Milliken	2.16	2	0.93	4	636	A	821	A
*SB Co./Chino	Riverside	East End & Central	2.00	5	2.50	4	DNS	DNS	DNS	DNS
*Chino	Riverside	Mountain & Euclid	1.05	1	1.05	4	DNS	DNS	DNS	DNS
*SB Co.	Riverside	Euclid & Grove	0.77	1	0.77	4	632	A	979	A
*SB Co/Chino/Ch Hills	Chino Hills	SR-71 & Central	0.83	1	0.83	4	DNS	DNS	DNS	DNS
*SB Co./SB City/Hgld	3rd	Waterman & Del Rosa	1.53	3	1.96	4	669	A	593	A
*Highland/SB City	3rd	Del Rosa & Sterling	0.52	1	1.92	4	836	A	817	A
*SB City/Highland	3rd	Sterling & Palm	2.00	2	1.00	4	597	A	631	A
*Chino	Edison	Rte 71 & Central	1.80	3	1.67	4	DNS	DNS	DNS	DNS
Chino	Edison	Central & Euclid	2.16	1	0.46	2	1132	A	1084	A
Caltrans	SR-38	Orange & Wabash	2.45	1	0.41	2	DNS	DNS	DNS	DNS
Caltrans	SR-38	Wabash & Garnet	2.35	0	0.00	2	DNS	DNS	DNS	DNS
Caltrans	SR-38	Garnet & Bryant	3.10	0	0.00	2	DNS	DNS	DNS	DNS
SB County/Yucaipa	5th/Sand Cyn	Wabash & Yucaipa	2.55	0	0.00	2-4			350	A
*Yucaipa	Yucaipa	I-10 WB Ramp & 14th	1.50	1	0.66	4	1046	B	1253	B
*Yucaipa	Yucaipa	14th & Oak Glen	1.35	2	1.48	4	1217	B	1675	B
*Yucaipa	County Line Road	I-10 WB Ramp & Bryant	1.75	1	0.57	2	519	A	462	A
Yucaipa	Avenue F	I-10 WB Ramp & Bryant	3.85	0	0.00	2	297	A	227	A
*Redlands	Redlands	Alabama & Citrus	1.95	6	3.07	4	DNS	DNS	DNS	DNS
*Redlands	Redlands	Citrus & Ford	1.75	6	3.43	4	DNS	DNS	DNS	DNS
*Redlands	Bar./Brook./Cit.	Alabama & Redlands	2.05	4	1.95	4	DNS	DNS	DNS	DNS
*Redlands	Citrus	Redlands & I-10	0.60	4	6.66	4	DNS	DNS	DNS	DNS
*Redlands	Citrus	I-10 & Wabash	2.10	2	0.95	4	DNS	DNS	DNS	DNS
*Rialto/SB City	Merrill/Mill	Riverside & Pepper	0.95	4	4.20	2	349	C	396	C
*SB City/Colton	Mill	Pepper & Rancho	1.00	2	2.00	2	411	B	435	B
*Colton/SB City	Mill	Rancho & Mt. Vernon	1.10	2	1.81	2	416	B	512	B
*Ontario/Fontana	Jurupa	I-15 & Etiwanda	1.52	2	1.32	4	1025	A	858	A

Table A-4
SAN BERNARDINO COUNTY CMP SEGMENT LEVEL OF SERVICE

**These segment to be replaced in 2002 by intersection traffic signal and/or 4-way stop analysis*
***Travel*
DNS = Data Not Submitted

Jurisdiction	On	Between	Distance	Number of Signals	Number of Sig/Mile	Number of Lanes (TW)	AM Volume	PEAK LOS	PM Volume	PEAK LOS
Victor Valley & Barstow										
Hesperia/SB Co.	Arrowhead Lake Road	SR-173 & Ranchero Rd	2.70	0	0.00	2	294	B	457	C
Hesperia	Arrowhead Lake Road	Rock Springs & S. City Limit	3.20	0	0.00	2	294	B	457	C
*Apple Valley	Bear Valley Road	Kiowa & Navajo	1.00	1	1.00	4	1350	A	1650	C
Apple Valley/SB Co.	Bear Valley Road	Navajo & SR-18	3.70	1	0.27	4	470	A	521	A
SB County	El Mirage	LA/SB Co. Ln & Sheep Crk Rd	5.20	0	0.00	2	182	A	264	A
SB Co./Adelanto	El Mirage	Sheep Crk Rd & SR-395	9.20	0	0.00	2	125	A	166	A
Caltrans	Palmdale (SR-18)	LA/SB Co. Ln & SR-395	15.00	0	0.00	2	DNS	DNS	DNS	DNS
Caltrans	Palmdale (SR-18)	SR-395 & Amargosa Rd	4.00	0	0.00	2	DNS	DNS	DNS	DNS
*Caltrans	Palmdale (SR-18)	Amargosa Rd & I-15 (SB)	0.40	1	2.50	4	DNS	DNS	DNS	DNS
SB County	Phelan	SR-138 & Sheep Creek Rd	2.60	0	0.00	2	221	A	306	A
SB County	Phelan	Sheep Crk Rd & Baldy Mesa	7.10	2	0.00	2	613	A	646	A
SB County	Phelan	Baldy Mesa & SR-395	2.64	1	0.38	2	460	A	557	A
*Caltrans	SR-18	Apl Valy Rd & Apl Valy Inn Rd	3.50	3	0.86	4	DNS	DNS	DNS	DNS
*Caltrans	SR-18	Apl Valy Inn Rd & Yucca Loma	2.10	2	0.95	4	DNS	DNS	DNS	DNS
Caltrans	SR-18	Yucca Loma & Bear Valy Rd	4.50	1	0.22	4-2	DNS	DNS	DNS	DNS
SB County	Sheep Creek Rd	El Mirage & Palmdale	7.00	0	0.00	2	81	A	103	
SB County	Sheep Creek Rd	Palmdale & Phelan	5.70	0	0.00	2	250	A	320	A
SB County	Sheep Creek Rd	Phelan & SR-138	2.00	0	0.00	2	317	A	422	A
Caltrans	SR-395	El Mirage & George AFB Rd	2.10	0	0.00	2				
Caltrans	SR-395	GAFB Rd & Palmdale (SR-18)	4.50	0	0.00	2				
Caltrans	SR-395	Palmdale (SR-18) & I-15	7.20	0	0.00	2				
Caltrans	SR-58	Ft Irwin(S) & I-15	3.19	0	0.00	2				

Table A-5

SAN BERNARDINO COUNTY CMP
FREEWAY LEVEL OF SERVICE

November 14, 2000
08-SBD-10-0.0/R39.16
CMP01-SD10PHV_00xls

2000 SAN BERNARDINO COUNTY CMP
(Based on 1999 Counts)
ROUTE 10 PEAK HOUR VOLUMES

Basic Freeway Segments		PM PEAK HOUR VOLUME					AM PEAK HOUR VOLUME				
From	To	Two-Way Volume	EASTBOUND		WESTBOUND		Two-Way Volume	WESTBOUND		EASTBOUND	
			DS	VOL.	DS	VOL.		DS	VOL.	DS	VOL.
LA COUNTY LINE	MONTE VISTA AVE	15700	55.0	8640	45.0	7060	15700	55.0	8640	45.0	7060
MONTE VISTA AVE	CENTRAL AVENUE	15300	55.0	8420	45.0	6880	15300	55.0	8420	45.0	6880
CENTRAL AVENUE	MOUNTAIN AVENUE	15300	55.0	8420	45.0	6880	15300	55.0	8420	45.0	6880
MOUNTAIN AVENUE	JCT RTE 83/EUCLID AVE	15700	55.0	8640	45.0	7060	15700	55.0	8640	45.0	7060
JCT RTE 83/EUCLID AVE	FOURTH STREET	15200	55.0	8360	45.0	6840	15200	55.0	8360	45.0	6840
FOURTH STREET	VINEYARD AVENUE	15000	55.0	8250	45.0	6750	15000	55.0	8250	45.0	6750
VINEYARD AVENUE	ARCHIBALD AVENUE	15100	55.0	8310	45.0	6790	15100	55.0	8310	45.0	6790
ARCHIBALD AVENUE	HAVEN AVENUE	16200	55.0	8910	45.0	7290	16200	55.0	8910	45.0	7290
HAVEN AVENUE	MILLIKEN AVENUE	16200	55.0	8910	45.0	7290	16200	55.0	8910	45.0	7290
MILLIKEN AVENUE	JCT. RTE 15	16200	55.0	8910	45.0	7290	16200	55.0	8910	45.0	7290
JCT. RTE 15	ETIWANDA AVENUE	13700	55.0	7540	45.0	6160	13700	55.0	7540	45.0	6160
ETIWANDA AVENUE	CHERRY AVENUE	16300	50.0	8150	50.0	8150	16300	50.0	8150	50.0	8150
CHERRY AVENUE	CITRUS AVENUE	16200	50.0	8100	50.0	8100	16200	50.0	8100	50.0	8100
CITRUS AVENUE	SIERRA AVENUE	15900	50.0	7950	50.0	7950	15900	50.0	7950	50.0	7950
SIERRA AVENUE	CEDAR AVENUE	15100	50.0	7550	50.0	7550	15100	50.0	7550	50.0	7550
CEDAR AVENUE	RIVERSIDE AVENUE	14400	55.0	7920	45.0	6480	14400	55.0	7920	45.0	6480
RIVERSIDE AVENUE	PEPPER AVENUE	14300	55.0	7870	45.0	6430	14300	55.0	7870	45.0	6430
PEPPER AVENUE	RANCHO AVENUE	14200	55.0	7810	45.0	6390	14200	55.0	7810	45.0	6390
RANCHO AVENUE	NINTH STREET	14000	55.0	7700	45.0	6300	14000	55.0	7700	45.0	6300
NINTH STREET	MT. VERNON AVENUE	13800	55.0	7590	45.0	6210	13800	55.0	7590	45.0	6210
MT. VERNON AVENUE	JCT. RTE 215	13600	55.0	7480	45.0	6120	13600	55.0	7480	45.0	6120
JCT. RTE 215	WATERMAN AVENUE	15500	57.5	8910	42.5	6590	15500	57.5	8910	42.5	6590
WATERMAN AVENUE	TIPPECANOE AVENUE	14200	57.5	8170	42.5	6030	14200	57.5	8170	42.5	6030
TIPPECANOE AVENUE	MOUNTAIN VIEW AVENUE	14100	57.5	8110	42.5	5990	14100	57.5	8110	42.5	5990
MOUNTAIN VIEW AVENUE	CALIFORNIA STREET	14000	57.5	8050	42.5	5950	14000	57.5	8050	42.5	5950
CALIFORNIA STREET	JCT. RTE 30/ALABAMA	13800	60.0	8280	40.0	5520	13800	60.0	8280	40.0	5520
JCT. RTE 30/ALABAMA	ORANGE STREET/RTE 38	10800	60.0	6480	40.0	4320	10800	60.0	6480	40.0	4320
ORANGE STREET/RTE 38	SIXTH STREET	8700	60.0	5220	40.0	3480	8700	60.0	5220	40.0	3480
SIXTH STREET	UNIVERSITY STREET	9300	60.0	5580	40.0	3720	9300	60.0	5580	40.0	3720
UNIVERSITY STREET	CYPRESS AVENUE	7600	60.0	4560	40.0	3040	7600	60.0	4560	40.0	3040
CYPRESS AVENUE	FORD ST/MORRISON AVE	7900	60.0	4740	40.0	3160	7900	60.0	4740	40.0	3160
FORD ST/MORRISON AVE	REDLANDS BLVD	7100	60.0	4260	40.0	2840	7100	60.0	4260	40.0	2840
REDLANDS BLVD	WABASH AVENUE	7600	60.0	4560	40.0	3040	7600	60.0	4560	40.0	3040
WABASH AVENUE	YUCAIPA BLVD	7700	60.0	4620	40.0	3080	7700	60.0	4620	40.0	3080
YUCAIPA BLVD	LIVE OAK CANYON RD	6100	60.0	3660	40.0	2440	6100	60.0	3660	40.0	2440
LIVE OAK CANYON RD	COUNTY LINE RD(RIV.CO.)	5500	60.0	3300	40.0	2200	5500	60.0	3300	40.0	2200

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2000 SAN BERNARDINO COUNTY CMP
(Based on 1999 Counts)
ROUTE 10 EASTBOUND PM

Basic Freeway Segments		Capacity	No. Lanes	Volume	Factor	Volume	Table 3-4		Table 3-7		Table 3-8				Table 3-1 for 70 mph
From	To	C(j)	N	V	PHF	SF	P(t)	E(t)	P(r)	E(r)	P(b)	E(b)	f(HV)	V/C	LOS
LA COUNTY LINE	MONTE VISTA AVE	2200	4	8640	0.95	9095	0.05	1.5	0.02	1.2	0.01	1.5	0.967	1.07	_F
MONTE VISTA AVE	CENTRAL AVENUE	2200	4	8420	0.95	8863	0.05	1.5	0.02	1.2	0.01	1.5	0.967	1.04	_F
CENTRAL AVENUE	MOUNTAIN AVENUE	2200	4	8420	0.95	8863	0.05	1.5	0.02	1.2	0.01	1.5	0.967	1.04	_F
MOUNTAIN AVENUE	JCT RTE 83/EUCLID AVE	2200	4	8640	0.95	9095	0.05	1.5	0.02	1.2	0.01	1.5	0.967	1.07	_F
JCT RTE 83/EUCLID AVE	FOURTH STREET	2200	4	8360	0.95	8800	0.05	1.5	0.02	1.2	0.01	1.5	0.967	1.03	_F
FOURTH STREET	VINEYARD AVENUE	2200	5	8250	0.85	9706	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.91	_E
VINEYARD AVENUE	ARCHIBALD AVENUE	2200	5	8310	0.85	9776	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.92	_E
ARCHIBALD AVENUE	HAVEN AVENUE	2200	5	8910	0.90	9900	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.93	_E
HAVEN AVENUE	MILLIKEN AVENUE	2200	5	8910	0.90	9900	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.93	_E
MILLIKEN AVENUE	JCT. RTE 15	2200	5	8910	0.90	9900	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.93	_E
JCT. RTE 15	ETIWANDA AVENUE	2200	4	7540	0.95	7937	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.93	_E
ETIWANDA AVENUE	CHERRY AVENUE	2200	4	8150	0.97	8402	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.99	_E
CHERRY AVENUE	CITRUS AVENUE	2200	4	8100	0.97	8351	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.98	_E
CITRUS AVENUE	SIERRA AVENUE	2200	4	7950	0.97	8196	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.96	_E
SIERRA AVENUE	CEDAR AVENUE	2200	4	7550	0.95	7947	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.93	_E
CEDAR AVENUE	RIVERSIDE AVENUE	2200	4	7920	0.95	8337	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.98	_E
RIVERSIDE AVENUE	PEPPER AVENUE	2200	4	7870	0.95	8284	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.97	_E
PEPPER AVENUE	RANCHO AVENUE	2200	4	7810	0.95	8221	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.97	_E
RANCHO AVENUE	NINTH STREET	2200	4	7700	0.95	8105	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.95	_E
NINTH STREET	MT. VERNON AVENUE	2200	4	7590	0.95	7989	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.94	_E
MT. VERNON AVENUE	JCT. RTE 215	2200	5	7480	0.90	8311	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.78	_D
JCT. RTE 215	WATERMAN AVENUE	2200	5	8910	0.85	10482	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.99	_E
WATERMAN AVENUE	TIPPECANOE AVENUE	2200	4	8170	0.95	8600	0.05	1.5	0.02	1.2	0.01	1.5	0.967	1.01	_F
TIPPECANOE AVENUE	MOUNTAIN VIEW AVENUE	2200	4	8110	0.95	8537	0.05	1.5	0.02	1.2	0.01	1.5	0.967	1.00	_E
MOUNTAIN VIEW AVENUE	CALIFORNIA STREET	2200	4	8050	0.95	8474	0.05	1.5	0.02	1.2	0.01	1.5	0.967	1.00	_E
CALIFORNIA STREET	JCT. RTE 30/ALABAMA	2200	5	8280	0.90	9200	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.86	_D
JCT. RTE 30/ALABAMA	ORANGE STREET/RTE 38	2200	4	6480	0.85	7624	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.90	_E
ORANGE STREET/RTE 38	SIXTH STREET	2200	3	5220	0.95	5495	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.86	_D
SIXTH STREET	UNIVERSITY STREET	2200	3	5580	0.95	5874	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.92	_E
UNIVERSITY STREET	CYPRESS AVENUE	2200	3	4560	0.95	4800	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.75	_C
CYPRESS AVENUE	FORD ST/MORRISON AVE	2200	3	4740	0.95	4989	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.78	_D
FORD ST/MORRISON AVE	REDLANDS BLVD	2200	3	4260	0.95	4484	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.70	_C
REDLANDS BLVD	WABASH AVENUE	2200	3	4560	0.95	4800	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.75	_C
WABASH AVENUE	YUCAIPA BLVD	2200	3	4620	0.95	4863	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.76	_D
YUCAIPA BLVD	LIVE OAK CANYON RD	2200	3	3660	0.95	3853	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.60	_C
LIVE OAK CANYON RD	COUNTY LINE RD(RIV.CO.)	2200	3	3300	0.95	3474	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.54	_B

Novem ber 14, 2000
08-SBD-10-0.0/R39.16
Filename: 10WBPM_00.XLS

2000 SAN BERNARDINO COUNTY CMP
(Based on 1999 Counts)
ROUTE 10 WESTBOUND PM

Basic Freeway Segments		Capacity	No. Lanes	Volume	Factor	Volume		Table 3-4		Table 3-7		Table 3-8			(for 70 mph)
From	To	C(j)	N	V	PHF	SF	P(t)	E(t)	P(r)	E(r)	P(b)	E(b)	f(HV)	V/C	LOS
LA COUNTY LINE	MONTE VISTA AVE	2200	4	7060	0.95	7432	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.87	D
MONTE VISTA AVE	CENTRAL AVENUE	2200	4	6880	0.95	7242	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.85	D
CENTRAL AVENUE	MOUNTAIN AVENUE	2200	4	6880	0.95	7242	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.85	D
MOUNTAIN AVENUE	JCT RTE 83/EUCLID AVE	2200	4	7060	0.95	7432	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.87	D
JCT RTE 83/EUCLID AVE	FOURTH STREET	2200	4	6840	0.95	7200	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.85	D
FOURTH STREET	VINEYARD AVENUE	2200	5	6750	0.85	7941	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.75	C
VINEYARD AVENUE	ARCHIBALD AVENUE	2200	5	6790	0.85	7988	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.75	C
ARCHIBALD AVENUE	HAVEN AVENUE	2200	5	7290	0.90	8100	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.76	D
HAVEN AVENUE	MILLIKEN AVENUE	2200	5	7290	0.90	8100	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.76	D
MILLIKEN AVENUE	JCT. RTE 15	2200	5	7290	0.90	8100	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.76	D
JCT. RTE 15	ETIWANDA AVENUE	2200	4	6160	0.95	6484	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.76	D
ETIWANDA AVENUE	CHERRY AVENUE	2200	4	8150	0.97	8402	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.99	E
CHERRY AVENUE	CITRUS AVENUE	2200	4	8100	0.97	8351	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.98	E
CITRUS AVENUE	SIERRA AVENUE	2200	4	7950	0.97	8196	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.96	E
SIERRA AVENUE	CEDAR AVENUE	2200	4	7550	0.95	7947	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.93	E
CEDAR AVENUE	RIVERSIDE AVENUE	2200	4	6480	0.95	6821	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.80	D
RIVERSIDE AVENUE	PEPPER AVENUE	2200	4	6430	0.95	6768	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.80	D
PEPPER AVENUE	RANCHO AVENUE	2200	4	6390	0.95	6726	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.79	D
RANCHO AVENUE	NINTH STREET	2200	4	6300	0.95	6632	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.78	D
NINTH STREET	MT. VERNON AVENUE	2200	4	6210	0.95	6537	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.77	D
MT. VERNON AVENUE	JCT. RTE 215	2200	5	6120	0.90	6800	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.64	C
JCT. RTE 215	WATERMAN AVENUE	2200	5	6590	0.85	7753	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.73	C
WATERMAN AVENUE	TIPPECANOE AVENUE	2200	4	6030	0.95	6347	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.75	C
TIPPECANOE AVENUE	MOUNTAIN VIEW AVENUE	2200	4	5990	0.95	6305	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.74	C
MOUNTAIN VIEW AVENUE	CALIFORNIA STREET	2200	4	5950	0.95	6263	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.74	C
CALIFORNIA STREET	JCT. RTE 30/ALABAMA	2200	5	5520	0.90	6133	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.58	C
JCT. RTE 30/ALABAMA	ORANGE STREET/RTE 38	2200	4	4320	0.85	5082	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.60	C
ORANGE STREET/RTE 38	SIXTH STREET	2200	3	3480	0.95	3663	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.57	C
SIXTH STREET	UNIVERSITY STREET	2200	3	3720	0.95	3916	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.61	C
UNIVERSITY STREET	CYPRESS AVENUE	2200	3	3040	0.95	3200	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.50	B
CYPRESS AVENUE	FORD ST/MORRISON AVE	2200	3	3160	0.95	3326	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.52	_B
FORD ST/MORRISON AVE	REDLANDS BLVD	2200	3	2840	0.95	2989	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.47	_B
REDLANDS BLVD	WABASH AVENUE	2200	3	3040	0.95	3200	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.50	_B
WABASH AVENUE	YUCAIPA BLVD	2200	3	3080	0.95	3242	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.51	_B
YUCAIPA BLVD	LIVE OAK CANYON RD	2200	3	2440	0.95	2568	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.40	_B
LIVE OAK CANYON RD	COUNTY LINE RD(RIV.CO.)	2200	3	2200	0.95	2316	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.36	_B

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2000 SAN BERNARDINO COUNTY CMP
(Based on 1999 Counts)
ROUTE 10 WESTBOUND AM

Basic Freeway Segments		Capacity	No. Lanes	Volume	Factor	Volume	Table 3-4		Table 3-7		Table 3-8				Table 3-1 for 70 mph
From	To	C(j)	N	V	PHF	SF	P(t)	E(t)	P(r)	E(r)	P(b)	E(b)	f(HV)	V/C	LOS
LA COUNTY LINE	MONTE VISTA AVE	2200	4	8640	0.95	9095	0.05	1.5	0.02	1.2	0.01	1.5	0.967	1.07	F
MONTE VISTA AVE	CENTRAL AVENUE	2200	4	8420	0.95	8863	0.05	1.5	0.02	1.2	0.01	1.5	0.967	1.04	F
CENTRAL AVENUE	MOUNTAIN AVENUE	2200	4	8420	0.95	8863	0.05	1.5	0.02	1.2	0.01	1.5	0.967	1.04	F
MOUNTAIN AVENUE	JCT RTE 83/EUCLID AVE	2200	4	8640	0.95	9095	0.05	1.5	0.02	1.2	0.01	1.5	0.967	1.07	F
JCT RTE 83/EUCLID AVE	FOURTH STREET	2200	4	8360	0.95	8800	0.05	1.5	0.02	1.2	0.01	1.5	0.967	1.03	F
FOURTH STREET	VINEYARD AVENUE	2200	5	8250	0.85	9706	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.91	E
VINEYARD AVENUE	ARCHIBALD AVENUE	2200	5	8310	0.85	9776	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.92	E
ARCHIBALD AVENUE	HAVEN AVENUE	2200	5	8910	0.90	9900	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.93	E
HAVEN AVENUE	MILLIKEN AVENUE	2200	5	8910	0.90	9900	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.93	E
MILLIKEN AVENUE	JCT. RTE 15	2200	5	8910	0.90	9900	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.93	E
JCT. RTE 15	ETIWANDA AVENUE	2200	4	7540	0.95	7937	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.93	E
ETIWANDA AVENUE	CHERRY AVENUE	2200	4	8150	0.97	8402	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.99	E
CHERRY AVENUE	CITRUS AVENUE	2200	4	8100	0.97	8351	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.98	E
CITRUS AVENUE	SIERRA AVENUE	2200	4	7950	0.97	8196	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.96	E
SIERRA AVENUE	CEDAR AVENUE	2200	4	7550	0.95	7947	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.93	E
CEDAR AVENUE	RIVERSIDE AVENUE	2200	4	7920	0.95	8337	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.98	E
RIVERSIDE AVENUE	PEPPER AVENUE	2200	4	7870	0.95	8284	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.97	E
PEPPER AVENUE	RANCHO AVENUE	2200	4	7810	0.95	8221	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.97	E
RANCHO AVENUE	NINTH STREET	2200	4	7700	0.95	8105	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.95	E
NINTH STREET	MT. VERNON AVENUE	2200	4	7590	0.95	7989	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.94	E
MT. VERNON AVENUE	JCT. RTE 215	2200	5	7480	0.90	8311	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.78	D
JCT. RTE 215	WATERMAN AVENUE	2200	5	8910	0.85	10482	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.99	E
WATERMAN AVENUE	TIPPECANOE AVENUE	2200	4	8170	0.95	8600	0.05	1.5	0.02	1.2	0.01	1.5	0.967	1.01	F
TIPPECANOE AVENUE	MOUNTAIN VIEW AVENUE	2200	4	8110	0.95	8537	0.05	1.5	0.02	1.2	0.01	1.5	0.967	1.00	E
MOUNTAIN VIEW AVENUE	CALIFORNIA STREET	2200	4	8050	0.95	8474	0.05	1.5	0.02	1.2	0.01	1.5	0.967	1.00	E
CALIFORNIA STREET	JCT. RTE 30/ALABAMA	2200	5	8280	0.90	9200	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.86	D
JCT. RTE 30/ALABAMA	ORANGE STREET/RTE 38	2200	4	6480	0.85	7624	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.90	E
ORANGE STREET/RTE 38	SIXTH STREET	2200	3	5220	0.95	5495	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.86	D
SIXTH STREET	UNIVERSITY STREET	2200	3	5580	0.95	5874	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.92	E
UNIVERSITY STREET	CYPRESS AVENUE	2200	3	4560	0.95	4800	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.75	C
CYPRESS AVENUE	FORD ST/MORRISON AVE	2200	3	4740	0.95	4989	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.78	D
FORD ST/MORRISON AVE	REDLANDS BLVD	2200	3	4260	0.95	4484	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.70	C
REDLANDS BLVD	WABASH AVENUE	2200	3	4560	0.95	4800	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.75	C
WABASH AVENUE	YUCAIPA BLVD	2200	3	4620	0.95	4863	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.76	D
YUCAIPA BLVD	LIVE OAK CANYON RD	2200	3	3660	0.95	3853	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.60	C
LIVE OAK CANYON RD	COUNTY LINE RD(RIV.CO.)	2200	3	3300	0.95	3474	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.54	B

November 14, 2000
08-SBD-10-0.0/R39.16
Filename: 10EBAM_00.XLS

2000 SAN BERNARDINO COUNTY CMP
(Based on 1999 Counts)
ROUTE 10 EASTBOUND AM

Basic Freeway Segments		Capacity	No. Lanes	Volume	Factor	Volume	Table 3-4		Table 3-7		Table 3-8				Table 3-1 (for 70 mph)
From	To	C(j)	N	V	PHF	SF	P(t)	E(t)	P(r)	E(r)	P(b)	E(b)	f(HV)	V/C	LOS
LA COUNTY LINE	MONTE VISTA AVE	2200	4	7060	0.95	7432	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.87	D
MONTE VISTA AVE	CENTRAL AVENUE	2200	4	6880	0.95	7242	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.85	D
CENTRAL AVENUE	MOUNTAIN AVENUE	2200	4	6880	0.95	7242	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.85	D
MOUNTAIN AVENUE	JCT RTE 83/EUCLID AVE	2200	4	7060	0.95	7432	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.87	D
JCT RTE 83/EUCLID AVE	FOURTH STREET	2200	4	6840	0.95	7200	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.85	D
FOURTH STREET	VINEYARD AVENUE	2200	5	6750	0.85	7941	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.75	C
VINEYARD AVENUE	ARCHIBALD AVENUE	2200	5	6790	0.85	7988	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.75	C
ARCHIBALD AVENUE	HAVEN AVENUE	2200	5	7290	0.90	8100	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.76	D
HAVEN AVENUE	MILLIKEN AVENUE	2200	5	7290	0.90	8100	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.76	D
MILLIKEN AVENUE	JCT. RTE 15	2200	5	7290	0.90	8100	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.76	D
JCT. RTE 15	ETIWANDA AVENUE	2200	4	6160	0.95	6484	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.76	D
ETIWANDA AVENUE	CHERRY AVENUE	2200	4	8150	0.97	8402	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.99	E
CHERRY AVENUE	CITRUS AVENUE	2200	4	8100	0.97	8351	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.98	E
CITRUS AVENUE	SIERRA AVENUE	2200	4	7950	0.97	8196	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.96	E
SIERRA AVENUE	CEDAR AVENUE	2200	4	7550	0.95	7947	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.93	E
CEDAR AVENUE	RIVERSIDE AVENUE	2200	4	6480	0.95	6821	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.80	D
RIVERSIDE AVENUE	PEPPER AVENUE	2200	4	6430	0.95	6768	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.80	D
PEPPER AVENUE	RANCHO AVENUE	2200	4	6390	0.95	6726	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.79	D
RANCHO AVENUE	NINTH STREET	2200	4	6300	0.95	6632	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.78	D
NINTH STREET	MT. VERNON AVENUE	2200	4	6210	0.95	6537	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.77	D
MT. VERNON AVENUE	JCT. RTE 215	2200	5	6120	0.90	6800	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.64	C
JCT. RTE 215	WATERMAN AVENUE	2200	5	6590	0.85	7753	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.73	C
WATERMAN AVENUE	TIPPECANOE AVENUE	2200	4	6030	0.95	6347	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.75	C
TIPPECANOE AVENUE	MOUNTAIN VIEW AVENUE	2200	4	5990	0.95	6305	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.74	C
MOUNTAIN VIEW AVENUE	CALIFORNIA STREET	2200	4	5950	0.95	6263	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.74	C
CALIFORNIA STREET	JCT. RTE 30/ALABAMA	2200	5	5520	0.90	6133	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.58	C
JCT. RTE 30/ALABAMA	ORANGE STREET/RTE 38	2200	4	4320	0.85	5082	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.60	C
ORANGE STREET/RTE 38	SIXTH STREET	2200	3	3480	0.95	3663	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.57	C
SIXTH STREET	UNIVERSITY STREET	2200	3	3720	0.95	3916	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.61	C
UNIVERSITY STREET	CYPRESS AVENUE	2200	3	3040	0.95	3200	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.50	B
CYPRESS AVENUE	FORD ST/MORRISON AVE	2200	3	3160	0.95	3326	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.52	B
FORD ST/MORRISON AVE	REDLANDS BLVD	2200	3	2840	0.95	2989	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.47	B
REDLANDS BLVD	WABASH AVENUE	2200	3	3040	0.95	3200	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.50	B
WABASH AVENUE	YUCAIPA BLVD	2200	3	3080	0.95	3242	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.51	B
YUCAIPA BLVD	LIVE OAK CANYON RD	2200	3	2440	0.95	2568	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.40	B
LIVE OAK CANYON RD	COUNTY LINE RD(RIV.CO.)	2200	3	2200	0.95	2316	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.36	B

September 29, 2000
08-SBD-15-0.00/76.88
FILENAME: SBD15PHV_00.XLS

2000 SAN BERNARDINO COUNTY CMP
(Based on 1999 Counts)
ROUTE 15 PEAK HOUR VOLUMES

Basic Freeway Segments		PM PEAK HOUR VOLUME					AM PEAK HOUR VOLUME				
From	To	Two-Way Volume	NORTHBOUND		SOUTHBOUND		Two-Way Volume	SOUTHBOUND		NORTHBOUND	
			DS	VOL.	DS	VOL.		DS	VOL.	DS	VOL.
RIV CO LINE	JURUPA AVENUE	13000	52.5	6830	47.5	6170	13000	52.5	6830	47.5	6170
JURUPA AVENUE	JCT. RTE 10	13300	52.5	6980	47.5	6320	13300	52.5	6980	47.5	6320
JCT. RTE 10	FOURTH STREET	11500	60.0	6900	40.0	4600	11500	60.0	6900	40.0	4600
FOURTH STREET	JCT. RTE 66	10200	60.0	6120	40.0	4080	10200	60.0	6120	40.0	4080
JCT. RTE 66	BASE LINE INTERCHANGE	8300	60.0	4980	40.0	3320	8300	60.0	4980	40.0	3320
BASE LINE INTERCHANGE	CHERRY AVENUE	7300	60.0	4380	40.0	2920	7300	60.0	4380	40.0	2920
CHERRY AVENUE	SIERRA AVENUE	6900	60.0	4140	40.0	2760	6900	60.0	4140	40.0	2760
SIERRA AVENUE	JCT. RTE 215	6800	60.0	4080	40.0	2720	6800	60.0	4080	40.0	2720
JCT. RTE 215	KENWOOD AVENUE	9200	62.5	5750	37.5	3450	9200	62.5	5750	37.5	3450
KENWOOD AVENUE	CLEGHORN ROAD	9200	62.5	5750	37.5	3450	9200	62.5	5750	37.5	3450
CLEGHORN ROAD	JCT. RTE 138	9500	62.5	5940	37.5	3560	9500	62.5	5940	37.5	3560
JCT. RTE 138	OAK HILL ROAD	7300	62.5	4560	37.5	2740	7300	62.5	4560	37.5	2740
OAK HILL ROAD	JCT. RTE 395 NORTH	6900	62.5	4310	37.5	2590	6900	62.5	4310	37.5	2590
JCT RTE 395 NORTH	JOSHUA ST./PALM AVE.	7000	60.0	4200	40.0	2800	7000	60.0	4200	40.0	2800
JOSHUA ST./PALM AVE.	PHELAN ROAD	7100	60.0	4260	40.0	2840	7100	60.0	4260	40.0	2840
PHELAN ROAD	BEAR VALLEY CUTOFF	6600	60.0	3960	40.0	2640	6600	60.0	3960	40.0	2640
BEAR VALLEY CUTOFF	JCT. RTE 18 WEST	6300	60.0	3780	40.0	2520	6300	60.0	3780	40.0	2520
JCT. RTE 18 WEST	MOJAVE DRIVE	6700	60.0	4020	40.0	2680	6700	60.0	4020	40.0	2680
MOJAVE DRIVE	JCT RTE 18 (D ST)	5900	60.0	3540	40.0	2360	5900	60.0	3540	40.0	2360
JCT RTE 18 (D ST)	E STREET	4800	65.0	3120	35.0	1680	4800	65.0	3120	35.0	1680
E STREET	S JCT STODDARD WELLS	4700	65.0	3060	35.0	1640	4700	65.0	3060	35.0	1640
S JCT STODDARD WELLS	N JCT STODDARD WELLS	4800	65.0	3120	35.0	1680	4800	65.0	3120	35.0	1680
N JCT STODDARD WELLS	BOULDER ROAD	4700	65.0	3060	35.0	1640	4700	65.0	3060	35.0	1640
BOULDER ROAD	WILD WASH	4700	65.0	3060	35.0	1640	4700	65.0	3060	35.0	1640
WILD WASH	HODGE ROAD	4800	65.0	3120	35.0	1680	4800	65.0	3120	35.0	1680
HODGE ROAD	OUTLET CENTER DR	4800	65.0	3120	35.0	1680	4800	65.0	3120	35.0	1680
OUTLET CENTER DR	LENWOOD ROAD	4800	65.0	3120	35.0	1680	4800	65.0	3120	35.0	1680
LENWOOD ROAD	WEST MAIN STREET	5100	65.0	3320	35.0	1780	5100	65.0	3320	35.0	1780
WEST MAIN STREET	JCT. RTE 247 SOUTH	5300	65.0	3450	35.0	1850	5300	65.0	3450	35.0	1850
JCT. RTE 247 SOUTH	JCT. RTE 40 EAST	5100	65.0	3320	35.0	1780	5100	65.0	3320	35.0	1780
JCT. RTE 40 EAST	EAST MAIN STREET	3300	65.0	2150	35.0	1150	3300	65.0	2150	35.0	1150
EAST MAIN STREET	JCT RTE 58 WEST	3850	65.0	2500	35.0	1350	3850	65.0	2500	35.0	1350

September 29, 2000
08-SBD-15-0.00/76.88
FILENAME: 15SBPM_00.XLS

2000 SAN BERNARDINO COUNTY CMP
(Based on 1999 Counts)
ROUTE 15 SOUTHBOUND PM

Basic Freeway Segments		Capacity	No. Lanes	Volume	Factor	Volume	Table 3-4		Table 3-7		Table 3-8				Table 3-1 (for 70 mph)
From	To	C(j)	N	V	PHF	SF	P(t)	E(t)	P(r)	E(r)	P(b)	E(b)	f(HV)	V/C	LOS
RIV CO LINE	JURUPA AVENUE	2200	4	6170	0.95	6495	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.76	D
JURUPA AVENUE	JCT. RTE 10	2200	4	6320	0.95	6653	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.78	D
JCT. RTE 10	FOURTH STREET	2200	4	4600	0.95	4842	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.57	C
FOURTH STREET	JCT. RTE 66	2200	4	4080	0.95	4295	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.50	B
JCT. RTE 66	BASE LINE INTERCHANGE	2200	4	3320	0.95	3495	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.41	B
BASE LINE INTERCHANGE	CHERRY AVENUE	2200	4	2920	0.90	3244	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.38	B
CHERRY AVENUE	SIERRA AVENUE	2200	4	2760	0.95	2905	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.34	B
SIERRA AVENUE	JCT. RTE 215	2200	3	2720	0.95	2863	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.45	B
JCT. RTE 215	KENWOOD AVENUE	2200	4	3450	0.90	3833	0.05	6	0.02	4	0.01	4	0.746	0.58	C
KENWOOD AVENUE	CLEGHORN ROAD	2200	4	3450	0.90	3833	0.05	6	0.02	4	0.01	4	0.746	0.58	C
CLEGHORN ROAD	JCT. RTE 138	2200	4	3560	0.90	3956	0.05	6	0.02	4	0.01	4	0.746	0.60	C
JCT. RTE 138	OAK HILL ROAD	2200	4	2740	0.90	3044	0.05	4	0.02	4	0.01	4	0.806	0.43	B
OAK HILL ROAD	JCT. RTE 395 NORTH	2200	4	2590	0.90	2878	0.05	4	0.02	4	0.01	4	0.806	0.41	B
JCT RTE 395 NORTH	JOSHUA ST./PALM AVE.	2200	3	2800	0.95	2947	0.05	2	0.02	2	0.01	2	0.926	0.48	B
JOSHUA ST./PALM AVE.	PHELAN ROAD	2200	3	2840	0.95	2989	0.05	2	0.02	2	0.01	2	0.926	0.49	B
PHELAN ROAD	BEAR VALLEY CUTOFF	2200	3	2640	0.90	2933	0.05	2	0.02	2	0.01	2	0.926	0.48	B
BEAR VALLEY CUTOFF	JCT. RTE 18 WEST	2200	3	2520	0.90	2800	0.05	2	0.02	2	0.01	2	0.926	0.46	B
JCT. RTE 18 WEST	MOJAVE DRIVE	2200	3	2680	0.90	2978	0.05	2	0.02	2	0.01	2	0.926	0.49	B
MOJAVE DRIVE	JCT RTE 18 (D ST)	2200	3	2360	0.90	2622	0.05	2	0.02	2	0.01	2	0.926	0.43	B
JCT RTE 18 (D ST)	E STREET	2200	2	1680	0.95	1768	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.42	B
E STREET	S JCT STODDARD WELLS	2200	2	1640	0.95	1726	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.41	B
S JCT STODDARD WELLS	N JCT STODDARD WELLS	2200	2	1680	0.95	1768	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.42	B
N JCT STODDARD WELLS	BOULDER ROAD	2200	2	1640	0.95	1726	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.41	B
BOULDER ROAD	WILD WASH	2200	2	1640	0.95	1726	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.41	B
WILD WASH	HODGE ROAD	2200	2	1680	0.95	1768	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.42	B
HODGE ROAD	OUTLET CENTER DR	2200	2	1680	0.95	1768	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.42	B
OUTLET CENTER DR	LENWOOD ROAD	2200	2	1680	0.95	1768	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.42	B
LENWOOD ROAD	WEST MAIN STREET	2200	2	1780	0.95	1874	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.44	B
WEST MAIN STREET	JCT. RTE 247 SOUTH	2200	2	1850	0.95	1947	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.46	B
JCT. RTE 247 SOUTH	JCT. RTE 40 EAST	2200	2	1780	0.95	1874	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.44	B
JCT. RTE 40 EAST	EAST MAIN STREET	2200	2	1150	0.95	1211	0.05	6	0.02	1.2	0.01	1.5	0.794	0.35	B
EAST MAIN STREET	JCT RTE 58 WEST	2200	2	1350	0.95	1421	0.05	3	0.02	1.2	0.01	1.5	0.902	0.36	B

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2000 SAN BERNARDINO COUNTY CMP
(Based on 1999 Counts)
ROUTE 15 NORTHBOUND PM

Basic Freeway Segments		Capacity	No. Lanes	Volume	Factor	Volume	Table 3-4		Table 3-7		Table 3-8				Table 3-1 for 70 mph
From	To	C(j)	N	V	PHF	SF	P(t)	E(t)	P(r)	E(r)	P(b)	E(b)	f(HV)	V/C	LOS
RIV CO LINE	JURUPA AVENUE	2200	4	6830	0.95	7189	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.84	D
JURUPA AVENUE	JCT. RTE 10	2200	4	6980	0.95	7347	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.86	D
JCT. RTE 10	FOURTH STREET	2200	4	6900	0.95	7263	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.85	D
FOURTH STREET	JCT. RTE 66	2200	4	6120	0.95	6442	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.76	D
JCT. RTE 66	BASE LINE INTERCHANGE	2200	4	4980	0.95	5242	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.62	C
BASE LINE INTERCHANGE	CHERRY AVENUE	2200	4	4380	0.90	4867	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.57	C
CHERRY AVENUE	SIERRA AVENUE	2200	4	4140	0.95	4358	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.51	B
SIERRA AVENUE	JCT. RTE 215	2200	3	4080	0.95	4295	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.67	C
JCT. RTE 215	KENWOOD AVENUE	2200	4	5750	0.90	6389	0.05	4	0.02	4	0.01	4	0.806	0.90	E
KENWOOD AVENUE	CLEGHORN ROAD	2200	4	5750	0.90	6389	0.05	4	0.02	4	0.01	4	0.806	0.90	E
CLEGHORN ROAD	JCT. RTE 138	2200	4	5940	0.90	6600	0.05	4	0.02	4	0.01	4	0.806	0.93	E
JCT. RTE 138	OAK HILL ROAD	2200	4	4560	0.90	5067	0.05	4	0.02	4	0.01	4	0.806	0.71	C
OAK HILL ROAD	JCT. RTE 395 NORTH	2200	4	4310	0.90	4789	0.05	4	0.02	4	0.01	4	0.806	0.67	C
JCT RTE 395 NORTH	JOSHUA ST./PALM AVE.	2200	3	4200	0.95	4421	0.05	2	0.02	2	0.01	2	0.926	0.72	C
JOSHUA ST./PALM AVE.	PHELAN ROAD	2200	3	4260	0.95	4484	0.05	2	0.02	2	0.01	2	0.926	0.73	C
PHELAN ROAD	BEAR VALLEY CUTOFF	2200	3	3960	0.90	4400	0.05	2	0.02	2	0.01	2	0.926	0.72	C
BEAR VALLEY CUTOFF	JCT. RTE 18 WEST	2200	3	3780	0.90	4200	0.05	2	0.02	2	0.01	2	0.926	0.69	C
JCT. RTE 18 WEST	MOJAVE DRIVE	2200	3	4020	0.90	4467	0.05	2	0.02	2	0.01	2	0.926	0.73	C
MOJAVE DRIVE	JCT RTE 18 (D ST)	2200	3	3540	0.90	3933	0.05	2	0.02	2	0.01	2	0.926	0.64	C
JCT RTE 18 (D ST)	E STREET	2200	2	3120	0.95	3284	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.77	D
E STREET	S JCT STODDARD WELLS	2200	2	3060	0.95	3221	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.76	D
S JCT STODDARD WELLS	N JCT STODDARD WELLS	2200	2	3120	0.95	3284	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.77	D
N JCT STODDARD WELLS	BOULDER ROAD	2200	2	3060	0.95	3221	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.76	D
BOULDER ROAD	WILD WASH	2200	2	3060	0.95	3221	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.76	D
WILD WASH	HODGE ROAD	2200	2	3120	0.95	3284	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.77	D
HODGE ROAD	OUTLET CENTER DR	2200	2	3120	0.95	3284	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.77	D
OUTLET CENTER DR	LENWOOD ROAD	2200	2	3120	0.95	3284	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.77	D
LENWOOD ROAD	WEST MAIN STREET	2200	2	3320	0.95	3495	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.82	D
WEST MAIN STREET	JCT. RTE 247 SOUTH	2200	2	3450	0.95	3632	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.85	D
JCT. RTE 247 SOUTH	JCT. RTE 40 EAST	2200	2	3320	0.95	3495	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.82	D
JCT. RTE 40 EAST	EAST MAIN STREET	2200	2	2150	0.95	2263	0.05	6	0.02	1.2	0.01	1.5	0.794	0.65	C
EAST MAIN STREET	JCT RTE 58 WEST	2200	2	2500	0.95	2632	0.05	3	0.02	1.2	0.01	1.5	0.902	0.66	C

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FILENAME: 15NBAM_00.xls

2000 SAN BERNARDINO COUNTY CMP
(Based on 1999 Counts)
ROUTE 15 NORTHBOUND AM

Basic Freeway Segments		Capacity	No. Lanes	Volume	Factor	Volume	Table 3-4		Table 3-7		Table 3-8				Table 3-1 (for 70 mph)
From	To	C(j)	N	V	PHF	SF	P(t)	E(t)	P(r)	E(r)	P(b)	E(b)	f(HV)	V/C	LOS
															D
RIV CO LINE	JURUPA AVENUE	2200	4	6170	0.95	6495	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.76	D
JURUPA AVENUE	JCT. RTE 10	2200	4	6320	0.95	6653	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.78	C
JCT. RTE 10	FOURTH STREET	2200	4	4600	0.95	4842	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.57	B
FOURTH STREET	JCT. RTE 66	2200	4	4080	0.95	4295	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.50	B
JCT. RTE 66	BASE LINE INTERCHANGE	2200	4	3320	0.95	3495	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.41	B
BASE LINE INTERCHANGE	CHERRY AVENUE	2200	4	2920	0.90	3244	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.38	B
CHERRY AVENUE	SIERRA AVENUE	2200	4	2760	0.95	2905	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.34	B
SIERRA AVENUE	JCT. RTE 215	2200	3	2720	0.95	2863	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.45	B
JCT. RTE 215	KENWOOD AVENUE	2200	4	3450	0.90	3833	0.05	6	0.02	4	0.01	4	0.746	0.58	C
KENWOOD AVENUE	CLEGHORN ROAD	2200	4	3450	0.90	3833	0.05	6	0.02	4	0.01	4	0.746	0.58	C
CLEGHORN ROAD	JCT. RTE 138	2200	4	3560	0.90	3956	0.05	6	0.02	4	0.01	4	0.746	0.60	C
JCT. RTE 138	OAK HILL ROAD	2200	4	2740	0.90	3044	0.05	4	0.02	4	0.01	4	0.806	0.43	B
OAK HILL ROAD	JCT. RTE 395 NORTH	2200	4	2590	0.90	2878	0.05	4	0.02	4	0.01	4	0.806	0.41	B
JCT RTE 395 NORTH	JOSHUA ST./PALM AVE.	2200	3	2800	0.95	2947	0.05	2	0.02	2	0.01	2	0.926	0.48	B
JOSHUA ST./PALM AVE.	PHELAN ROAD	2200	3	2840	0.95	2989	0.05	2	0.02	2	0.01	2	0.926	0.49	B
PHELAN ROAD	BEAR VALLEY CUTOFF	2200	3	2640	0.90	2933	0.05	2	0.02	2	0.01	2	0.926	0.48	B
BEAR VALLEY CUTOFF	JCT. RTE 18 WEST	2200	3	2520	0.90	2800	0.05	2	0.02	2	0.01	2	0.926	0.46	B
JCT. RTE 18 WEST	MOJAVE DRIVE	2200	3	2680	0.90	2978	0.05	2	0.02	2	0.01	2	0.926	0.49	B
MOJAVE DRIVE	JCT RTE 18 (D ST)	2200	3	2360	0.90	2622	0.05	2	0.02	2	0.01	2	0.926	0.43	B
JCT RTE 18 (D ST)	E STREET	2200	2	1680	0.95	1768	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.42	B
E STREET	S JCT STODDARD WELLS	2200	2	1640	0.95	1726	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.41	B
S JCT STODDARD WELLS	N JCT STODDARD WELLS	2200	2	1680	0.95	1768	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.42	B
N JCT STODDARD WELLS	BOULDER ROAD	2200	2	1640	0.95	1726	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.41	B
BOULDER ROAD	WILD WASH	2200	2	1640	0.95	1726	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.41	B
WILD WASH	HODGE ROAD	2200	2	1680	0.95	1768	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.42	B
HODGE ROAD	OUTLET CENTER DR	2200	2	1680	0.95	1768	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.42	B
OUTLET CENTER DR	LENWOOD ROAD	2200	2	1680	0.95	1768	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.42	B
LENWOOD ROAD	WEST MAIN STREET	2200	2	1780	0.95	1874	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.44	B
WEST MAIN STREET	JCT. RTE 247 SOUTH	2200	2	1850	0.95	1947	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.46	B
JCT. RTE 247 SOUTH	JCT. RTE 40 EAST	2200	2	1780	0.95	1874	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.44	B
JCT. RTE 40 EAST	EAST MAIN STREET	2200	2	1150	0.95	1211	0.05	6	0.02	1.2	0.01	1.5	0.794	0.35	B
EAST MAIN STREET	JCT RTE 58 WEST	2200	2	1350	0.95	1421	0.05	3	0.02	1.2	0.01	1.5	0.902	0.36	B

September 29, 2000 08-SBD-15-0.00/76.88 FILENAME: 15SBAM_00.xls		2000 SAN BERNARDINO COUNTY CMP (Based on 1999 Counts) ROUTE 15 SOUTHBOUND AM													
Basic Freeway Segments		Capacity	No. Lanes	Volume	Factor	Volume	Table 3-4		Table 3-7		Table 3-8				Table 3-1 (for 70 mph)
From	To	C(j)	N	V	PHF	SF	P(t)	E(t)	P(r)	E(r)	P(b)	E(b)	f(HV)	V/C	LOS
RIV CO LINE	JURUPA AVENUE	2200	4	6830	0.95	7189	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.84	D
JURUPA AVENUE	JCT. RTE 10	2200	4	6980	0.95	7347	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.86	D
JCT. RTE 10	FOURTH STREET	2200	4	6900	0.95	7263	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.85	D
FOURTH STREET	JCT. RTE 66	2200	4	6120	0.95	6442	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.76	D
JCT. RTE 66	BASE LINE INTERCHANGE	2200	4	4980	0.95	5242	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.62	C
BASE LINE INTERCHANGE	CHERRY AVENUE	2200	4	4380	0.90	4867	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.57	C
CHERRY AVENUE	SIERRA AVENUE	2200	4	4140	0.95	4358	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.51	B
SIERRA AVENUE	JCT. RTE 215	2200	3	4080	0.95	4295	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.67	C
JCT. RTE 215	KENWOOD AVENUE	2200	4	5750	0.95	6053	0.05	6	0.02	6	0.01	4	0.725	0.95	E
KENWOOD AVENUE	CLEGHORN ROAD	2200	4	5750	0.95	6053	0.05	6	0.02	6	0.01	4	0.725	0.95	E
CLEGHORN ROAD	JCT. RTE 138	2200	4	5940	0.95	6253	0.05	4	0.02	6	0.01	4	0.781	0.91	E
JCT. RTE 138	OAK HILL ROAD	2200	4	4560	0.90	5067	0.05	4	0.02	4	0.01	4	0.806	0.71	C
OAK HILL ROAD	JCT. RTE 395 NORTH	2200	4	4310	0.90	4789	0.05	4	0.02	4	0.01	4	0.806	0.67	C
JCT RTE 395 NORTH	JOSHUA ST./PALM AVE.	2200	3	4200	0.95	4421	0.05	2	0.02	2	0.01	2	0.926	0.72	C
JOSHUA ST./PALM AVE.	PHELAN ROAD	2200	3	4260	0.95	4484	0.05	2	0.02	2	0.01	2	0.926	0.73	C
PHELAN ROAD	BEAR VALLEY CUTOFF	2200	3	3960	0.90	4400	0.05	2	0.02	2	0.01	2	0.926	0.72	C
BEAR VALLEY CUTOFF	JCT. RTE 18 WEST	2200	3	3780	0.90	4200	0.05	2	0.02	2	0.01	2	0.926	0.69	C
JCT. RTE 18 WEST	MOJAVE DRIVE	2200	3	4020	0.90	4467	0.05	2	0.02	2	0.01	2	0.926	0.73	C
MOJAVE DRIVE	JCT RTE 18 (D ST)	2200	3	3540	0.90	3933	0.05	2	0.02	2	0.01	2	0.926	0.64	C
JCT RTE 18 (D ST)	E STREET	2200	2	3120	0.95	3284	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.77	C
E STREET	S JCT STODDARD WELLS	2200	2	3060	0.95	3221	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.76	C
S JCT STODDARD WELLS	N JCT STODDARD WELLS	2200	2	3120	0.95	3284	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.77	C
N JCT STODDARD WELLS	BOULDER ROAD	2200	2	3060	0.95	3221	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.76	D
BOULDER ROAD	WILD WASH	2200	2	3060	0.95	3221	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.76	D
WILD WASH	HODGE ROAD	2200	2	3120	0.95	3284	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.77	D
HODGE ROAD	OUTLET CENTER DR	2200	2	3120	0.95	3284	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.77	D
OUTLET CENTER DR	LENWOOD ROAD	2200	2	3120	0.95	3284	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.77	D
LENWOOD ROAD	WEST MAIN STREET	2200	2	3320	0.95	3495	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.82	D
WEST MAIN STREET	JCT. RTE 247 SOUTH	2200	2	3450	0.95	3632	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.85	D
JCT. RTE 247 SOUTH	JCT. RTE 40 EAST	2200	2	3320	0.95	3495	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.82	D
JCT. RTE 40 EAST	EAST MAIN STREET	2200	2	2150	0.95	2263	0.05	6	0.02	1.2	0.01	1.5	0.794	0.65	C
EAST MAIN STREET	JCT RTE 58 WEST	2200	2	2500	0.95	2632	0.05	3	0.02	1.2	0.01	1.5	0.902	0.66	C

November 14, 2000
08-SBD-30 PM 22.00 / R33.16
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2000 SAN BERNARDINO COUNTY CMP
(Based on 1999 Counts)
ROUTE 30 (FWY Portion) PEAK HOUR VOLUMES

Basic Freeway Segments		PM PEAK HOUR VOLUME					AM PEAK HOUR VOLUME				
From	To	Two-Way	EASTBOUND		WESTBOUND		Two-Way	WESTBOUND		EASTBOUND	
		Volume	DS	VOL.	DS	VOL.	Volume	DS	VOL.	DS	VOL.
HIGHLAND AVE.	JCT. RTE. 215	1450	55.0	800	45.0	650	1450	55.0	800	45.0	650
JCT. RTE. 215	H STREET	3000	55.0	1650	45.0	1350	3000	55.0	1650	45.0	1350
H STREET	NORTH JCT. RTE. 259	3100	55.0	1710	45.0	1390	3100	55.0	1710	45.0	1390
NORTH JCT RTE 259	JCT RTE 18/WATERMAN	6000	55.0	3300	45.0	2700	6000	55.0	3300	45.0	2700
JCT RTE 18/WATERMAN	DEL ROSA AVE.	6000	55.0	3300	45.0	2700	6000	55.0	3300	45.0	2700
DEL ROSA AVE.	HIGHLAND AVE.	5000	55.0	2750	45.0	2250	5000	55.0	2750	45.0	2250
HIGHLAND AVE	JCT. RTE. 330	3900	55.0	2150	45.0	1750	3900	55.0	2150	45.0	1750
JCT. RTE. 330	BASELINE ST.	4100	55.0	2260	45.0	1840	4100	55.0	2260	45.0	1840
BASELINE ST.	FIFTH ST.	4550	55.0	2500	45.0	2050	4550	55.0	2500	45.0	2050
FIFTH ST.	SAN BERNARDINO AVE.	5800	55.0	3190	45.0	2610	5800	55.0	3190	45.0	2610
SAN BERNARDINO AVE.	JCT. RTE. 10	5200	55.0	2860	45.0	2340	5200	55.0	2860	45.0	2340

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2000 SAN BERNARDINO COUNTY CMP
(Based on 1999 Counts)
ROUTE 30 (Freeway Portion) EASTBOUND PM

Basic Freeway Segments		Capacity	No. Lanes	Volume	Factor	Volume	Table 3-4		Table 3-7		Table 3-8				Table 3-1 (for 70 mph)
From	To	C(j)	N	V	PHF	SF	P(t)	E(t)	P(r)	E(r)	P(b)	E(b)	f(HV)	V/C	LOS
HIGHLAND AVE.	JCT. RTE. 215	2200	2	800	0.95	842	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.20	A
JCT. RTE. 215	H STREET	2200	2	1650	0.95	1737	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.41	B
H STREET	NORTH JCT. RTE. 259	2200	2	1710	0.95	1800	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.42	B
NORTH JCT RTE 259	JCT RTE 18/WATERMAN	2200	3	3300	0.90	3667	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.57	C
JCT RTE 18/WATERMAN	DEL ROSA AVE.	2200	3	3300	0.90	3667	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.57	C
DEL ROSA AVE.	HIGHLAND AVE.	2200	3	2750	0.90	3056	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.48	B
HIGHLAND AVE	JCT. RTE. 330	2200	3	2150	0.95	2263	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.35	B
JCT. RTE. 330	BASELINE ST.	2200	3	2260	0.95	2379	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.37	B
BASELINE ST.	FIFTH ST.	2200	3	2500	0.95	2632	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.41	B
FIFTH ST.	SAN BERNARDINO AVE.	2200	3	3190	0.95	3358	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.53	B
SAN BERNARDINO AVE.	JCT. RTE. 10	2200	3	2860	0.95	3011	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.47	B

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FILENAME: 30WBPM_00.XLS

2000 SAN BERNARDINO COUNTY CMP
(Based on 1999 Counts)
ROUTE 30 (Freeway Portion) WESTBOUND PM

Basic Freeway Segments		Capacity	No. Lanes	Volume	Factor	Volume	Table 3-4		Table 3-7		Table 3-8				Table 3-1 (for 70 mph)
From	To	C(j)	N	V	PHF	SF	P(t)	E(t)	P(r)	E(r)	P(b)	E(b)	f(HV)	V/C	LOS
HIGHLAND AVE.	JCT. RTE. 215	2200	2	650	0.95	684	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.16	A
JCT. RTE. 215	H STREET	2200	2	1350	0.95	1421	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.33	A
H STREET	NORTH JCT. RTE. 259	2200	2	1390	0.95	1463	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.34	B
NORTH JCT RTE 259	JCT RTE 18/WATERMAN	2200	3	2700	0.90	3000	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.47	B
JCT RTE 18/WATERMAN	DEL ROSA AVE.	2200	3	2700	0.90	3000	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.47	B
DEL ROSA AVE.	HIGHLAND AVE.	2200	3	2250	0.90	2500	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.39	B
HIGHLAND AVE	JCT. RTE. 330	2200	3	1750	0.95	1842	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.29	A
JCT. RTE. 330	BASELINE ST.	2200	3	1840	0.95	1937	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.30	A
BASELINE ST.	FIFTH ST.	2200	3	2050	0.95	2158	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.34	B
FIFTH ST.	SAN BERNARDINO AVE.	2200	3	2610	0.95	2747	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.43	B
SAN BERNARDINO AVE.	JCT. RTE. 10	2200	3	2340	0.95	2463	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.39	B

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FILENAME: 30WBAM_00.XLS

2000 SAN BERNARDINO COUNTY CMP
(Based on 1999 Counts)
ROUTE 30 (Freeway Portion) WESTBOUND AM

Basic Freeway Segments		Capacity	No. Lanes	Volume	Factor	Volume	Table 3-4		Table 3-7		Table 3-8				Table 3-1 (for 70 mph)
From	To	C(j)	N	V	PHF	SF	P(t)	E(t)	P(r)	E(r)	P(b)	E(b)	f(HV)	V/C	LOS
HIGHLAND AVE.	JCT. RTE. 215	2200	2	800	0.95	842	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.20	A
JCT. RTE. 215	H STREET	2200	2	1650	0.95	1737	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.41	B
H STREET	NORTH JCT. RTE. 259	2200	2	1710	0.95	1800	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.42	B
NORTH JCT RTE 259	JCT RTE 18/WATERMAN	2200	3	3300	0.90	3667	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.57	C
JCT RTE 18/WATERMAN	DEL ROSA AVE.	2200	3	3300	0.90	3667	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.57	C
DEL ROSA AVE.	HIGHLAND AVE.	2200	3	2750	0.90	3056	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.48	B
HIGHLAND AVE	JCT. RTE. 330	2200	3	2150	0.95	2263	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.35	B
JCT. RTE. 330	BASELINE ST.	2200	3	2260	0.95	2379	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.37	B
BASELINE ST.	FIFTH ST.	2200	3	2500	0.95	2632	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.41	B
FIFTH ST.	SAN BERNARDINO AVE.	2200	3	3190	0.95	3358	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.53	B
SAN BERNARDINO AVE.	JCT. RTE. 10	2200	3	2860	0.95	3011	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.47	B

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2000 SAN BERNARDINO COUNTY CMP
(Based on 1999 Counts)
ROUTE 30 (Freeway Portion) EASTBOUND AM

Basic Freeway Segments		Capacity	No. Lanes	Volume	Factor	Volume	Table 3-4		Table 3-7		Table 3-8				Table 3-1 (for 70 mph)
From	To	C(j)	N	V	PHF	SF	P(t)	E(t)	P(r)	E(r)	P(b)	E(b)	f(HV)	V/C	LOS
HIGHLAND AVE.	JCT. RTE. 215	2200	2	650	0.95	684	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.16	A
JCT. RTE. 215	H STREET	2200	2	1350	0.95	1421	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.33	A
H STREET	NORTH JCT. RTE. 259	2200	2	1390	0.95	1463	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.34	B
NORTH JCT RTE 259	JCT RTE 18/WATERMAN	2200	3	2700	0.90	3000	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.47	B
JCT RTE 18/WATERMAN	DEL ROSA AVE.	2200	3	2700	0.90	3000	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.47	B
DEL ROSA AVE.	HIGHLAND AVE.	2200	3	2250	0.90	2500	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.39	B
HIGHLAND AVE.	JCT. RTE. 330	2200	3	1750	0.95	1842	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.29	A
JCT. RTE. 330	BASELINE ST.	2200	3	1840	0.95	1937	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.30	A
BASELINE ST.	FIFTH ST.	2200	3	2050	0.95	2158	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.34	B
FIFTH ST.	SAN BERNARDINO AVE.	2200	3	2610	0.95	2747	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.43	B
SAN BERNARDINO AVE.	JCT. RTE. 10	2200	3	2340	0.95	2463	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.39	B

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2000 SAN BERNARDINO COUNTY CMP
(Based on 1999 Counts)
ROUTE 40 PEAK HOUR VOLUMES

Basic Freeway Segments		PM PEAK HOUR VOLUME					AM PEAK HOUR VOLUME				
From	To	Two-Way	EASTBOUND		WESTBOUND		Two-Way	WESTBOUND		EASTBOUND	
		Volume	DS	VOL.	DS	VOL.	Volume	DS	VOL.	DS	VOL.
JCT RTE 15 EAST	MONTARA AVE	1250	25.0	310	75.0	940	1250	40.0	500	60.0	750
MONTARA AVE	MAIN ST	1500	25.0	380	75.0	1120	1500	40.0	600	60.0	900
MAIN ST	NEBO ST	1700	25.0	430	75.0	1270	1700	40.0	680	60.0	1020
NEBO ST	A ST	1700	25.0	430	75.0	1270	1700	40.0	680	60.0	1020
A ST	AIRPORT RD	1550	25.0	390	75.0	1160	1550	40.0	620	60.0	930
AIRPORT RD	WEST NEWBERRY RD	1500	25.0	380	75.0	1120	1500	40.0	600	60.0	900
WEST NEWBERRY RD	FORT CADY RD	1400	25.0	350	75.0	1050	1400	40.0	560	60.0	840
FORT CADY RD	HECTOR RD	1450	25.0	360	75.0	1090	1450	40.0	580	60.0	870
HECTOR RD	CRUCERO RD	1450	25.0	360	75.0	1090	1450	40.0	580	60.0	870
CRUCERO RD	KELBAKER RD	1250	25.0	310	75.0	940	1250	40.0	500	60.0	750
KELBAKER RD	ESSEX RD	1250	25.0	310	75.0	940	1250	40.0	500	60.0	750
ESSEX RD	GOFFS RD	1250	25.0	310	75.0	940	1250	40.0	500	60.0	750
GOFFS RD	MOUNTAIN SPRINGS RD	1100	25.0	280	75.0	820	1100	40.0	440	60.0	660
MOUNTAIN SPRINGS	WATER RD	1050	25.0	260	75.0	790	1050	40.0	420	60.0	630
WATER RD	JCT RTE 95 NORTH	960	25.0	240	75.0	720	960	40.0	380	60.0	580
JCT RTE 95 NORTH	PARK RD	1100	25.0	280	75.0	820	1100	40.0	440	60.0	660
PARK RD	RIVER RD	1050	25.0	260	75.0	790	1050	40.0	420	60.0	630
RIVER RD	J ST	960	25.0	240	75.0	720	960	40.0	380	60.0	580
J ST	JCT RTE 95 SOUTH	1050	25.0	260	75.0	790	1050	40.0	420	60.0	630
JCT RTE 95 SOUTH	FIVE MILE RD	890	25.0	220	75.0	670	890	40.0	360	60.0	530
FIVE MILE RD	PARK MOABI RD	930	25.0	230	75.0	700	930	40.0	370	60.0	560
PARK MOABI RD	ARIZONA STATE LINE	900	25.0	230	75.0	670	900	40.0	360	60.0	540

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2000 SAN BERNARDINO COUNTY CMP
(Based on 1999 Counts)
ROUTE 40 EASTBOUND PM

Basic Freeway Segments		Capacity	No. Lanes	Volume	Factor	Volume	Table 3-4		Table 3-7		Table 3-8				Table 3-1 (for 70 mph)
From	To	C(j)	N	V	PHF	SF	P(t)	E(t)	P(r)	E(r)	P(b)	E(b)	f(HV)	V/C	LOS
JCT RTE 15 EAST	MONTARA AVE	2200	2	310	0.90	344	0.30	6	0.02	3	0.01	3	0.391	0.20	A
MONTARA AVE	MAIN ST	2200	2	380	0.90	422	0.30	6	0.02	3	0.01	3	0.391	0.25	A
MAIN ST	NEBO ST	2200	2	430	0.90	478	0.30	6	0.02	3	0.01	3	0.391	0.28	A
NEBO ST	A ST	2200	2	430	0.90	478	0.30	6	0.02	3	0.01	3	0.391	0.28	A
A ST	AIRPORT RD	2200	2	390	0.90	433	0.30	6	0.02	3	0.01	3	0.391	0.25	A
AIRPORT RD	WEST NEWBERRY RD	2200	2	380	0.90	422	0.30	6	0.02	3	0.01	3	0.391	0.25	A
WEST NEWBERRY RD	FORT CADY RD	2200	2	350	0.90	389	0.30	6	0.02	3	0.01	3	0.391	0.23	A
FORT CADY RD	HECTOR RD	2200	2	360	0.90	400	0.30	6	0.02	3	0.01	3	0.391	0.23	A
HECTOR RD	CRUCERO RD	2200	2	360	0.90	400	0.30	6	0.02	3	0.01	3	0.391	0.23	A
CRUCERO RD	KELBAKER RD	2200	2	310	0.90	344	0.30	6	0.02	3	0.01	3	0.391	0.20	A
KELBAKER RD	ESSEX RD	2200	2	310	0.90	344	0.30	6	0.02	3	0.01	3	0.391	0.20	A
ESSEX RD	GOFFS RD	2200	2	310	0.90	344	0.30	6	0.02	3	0.01	3	0.391	0.20	A
GOFFS RD	MOUNTAIN SPRINGS RD	2200	2	280	0.90	311	0.30	6	0.02	3	0.01	3	0.391	0.18	A
MOUNTAIN SPRINGS	WATER RD	2200	2	260	0.90	289	0.30	6	0.02	3	0.01	3	0.391	0.17	A
WATER RD	JCT RTE 95 NORTH	2200	2	240	0.90	267	0.30	6	0.02	3	0.01	3	0.391	0.16	A
JCT RTE 95 NORTH	PARK RD	2200	2	280	0.90	311	0.30	6	0.02	3	0.01	3	0.391	0.18	A
PARK RD	RIVER RD	2200	2	260	0.90	289	0.30	6	0.02	3	0.01	3	0.391	0.17	A
RIVER RD	J ST	2200	2	240	0.90	267	0.30	6	0.02	3	0.01	3	0.391	0.16	A
J ST	JCT RTE 95 SOUTH	2200	2	260	0.90	289	0.30	6	0.02	3	0.01	3	0.391	0.17	A
JCT RTE 95 SOUTH	FIVE MILE RD	2200	2	220	0.90	244	0.30	6	0.02	3	0.01	3	0.391	0.14	A
FIVE MILE RD	PARK MOABI RD	2200	2	230	0.90	256	0.30	6	0.02	3	0.01	3	0.391	0.15	A
PARK MOABI RD	ARIZONA STATE LINE	2200	2	230	0.90	256	0.30	6	0.02	3	0.01	3	0.391	0.15	A

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2000 SAN BERNARDINO COUNTY CMP
(Based on 1999 Counts)
ROUTE 40 WESTBOUND PM

Basic Freeway Segments		Capacity	No. Lanes	Volume	Factor	Volume	Table 3-4		Table 3-7		Table 3-8				Table 3-1 (for 70 mph)
From	To	C(j)	N	V	PHF	SF	P(t)	E(t)	P(r)	E(r)	P(b)	E(b)	f(HV)	V/C	LOS
JCT RTE 15 EAST	MONTARA AVE	2200	2	940	0.90	1044	0.30	6	0.02	3	0.01	3	0.391	0.61	C
MONTARA AVE	MAIN ST	2200	2	1120	0.90	1244	0.30	6	0.02	3	0.01	3	0.391	0.72	C
MAIN ST	NEBO ST	2200	2	1270	0.90	1411	0.30	6	0.02	3	0.01	3	0.391	0.82	D
NEBO ST	A ST	2200	2	1270	0.90	1411	0.30	6	0.02	3	0.01	3	0.391	0.82	D
A ST	AIRPORT RD	2200	2	1160	0.90	1289	0.30	6	0.02	3	0.01	3	0.391	0.75	C
AIRPORT RD	WEST NEWBERRY RD	2200	2	1120	0.90	1244	0.30	6	0.02	3	0.01	3	0.391	0.72	C
WEST NEWBERRY RD	FORT CADY RD	2200	2	1050	0.90	1167	0.30	6	0.02	3	0.01	3	0.391	0.68	C
FORT CADY RD	HECTOR RD	2200	2	1090	0.90	1211	0.30	6	0.02	3	0.01	3	0.391	0.70	C
HECTOR RD	CRUCERO RD	2200	2	1090	0.90	1211	0.30	6	0.02	3	0.01	3	0.391	0.70	C
CRUCERO RD	KELBAKER RD	2200	2	940	0.90	1044	0.30	6	0.02	3	0.01	3	0.391	0.61	C
KELBAKER RD	ESSEX RD	2200	2	940	0.90	1044	0.30	6	0.02	3	0.01	3	0.391	0.61	C
ESSEX RD	GOFFS RD	2200	2	940	0.90	1044	0.30	6	0.02	3	0.01	3	0.391	0.61	C
GOFFS RD	MOUNTAIN SPRINGS RD	2200	2	820	0.90	911	0.30	6	0.02	3	0.01	3	0.391	0.53	B
MOUNTAIN SPRINGS	WATER RD	2200	2	790	0.90	878	0.30	6	0.02	3	0.01	3	0.391	0.51	B
WATER RD	JCT RTE 95 NORTH	2200	2	720	0.90	800	0.30	6	0.02	3	0.01	3	0.391	0.47	B
JCT RTE 95 NORTH	PARK RD	2200	2	820	0.90	911	0.30	6	0.02	3	0.01	3	0.391	0.53	B
PARK RD	RIVER RD	2200	2	790	0.90	878	0.30	6	0.02	3	0.01	3	0.391	0.51	B
RIVER RD	J ST	2200	2	720	0.90	800	0.30	6	0.02	3	0.01	3	0.391	0.47	B
J ST	JCT RTE 95 SOUTH	2200	2	790	0.90	878	0.30	6	0.02	3	0.01	3	0.391	0.51	B
JCT RTE 95 SOUTH	FIVE MILE RD	2200	2	670	0.90	744	0.30	6	0.02	3	0.01	3	0.391	0.43	B
FIVE MILE RD	PARK MOABI RD	2200	2	700	0.90	778	0.30	6	0.02	3	0.01	3	0.391	0.45	B
PARK MOABI RD	ARIZONA STATE LINE	2200	2	670	0.90	744	0.30	6	0.02	3	0.01	3	0.391	0.43	B

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2000 SAN BERNARDINO COUNTY CMP
(Based on 1999 Counts)
ROUTE 40 WESTBOUND AM

Basic Freeway Segments		Capacity	No. Lanes	Volume	Factor	Volume		Table 3-4		Table 3-7		Table 3-8			Table 3-1 (for 70 mph)
From	To	C(j)	N	V	PHF	SF	P(t)	E(t)	P(r)	E(r)	P(b)	E(b)	f(HV)	V/C	LOS
JCT RTE 15 EAST	MONTARA AVE	2200	2	500	0.90	556	0.30	6	0.02	3	0.01	3	0.391	0.32	A
MONTARA AVE	MAIN ST	2200	2	600	0.90	667	0.30	6	0.02	3	0.01	3	0.391	0.39	B
MAIN ST	NEBO ST	2200	2	680	0.90	756	0.30	6	0.02	3	0.01	3	0.391	0.44	B
NEBO ST	A ST	2200	2	680	0.90	756	0.30	6	0.02	3	0.01	3	0.391	0.44	B
A ST	AIRPORT RD	2200	2	620	0.90	689	0.30	6	0.02	3	0.01	3	0.391	0.40	B
AIRPORT RD	WEST NEWBERRY RD	2200	2	600	0.90	667	0.30	6	0.02	3	0.01	3	0.391	0.39	B
WEST NEWBERRY RD	FORT CADY RD	2200	2	560	0.90	622	0.30	6	0.02	3	0.01	3	0.391	0.36	B
FORT CADY RD	HECTOR RD	2200	2	580	0.90	644	0.30	6	0.02	3	0.01	3	0.391	0.37	B
HECTOR RD	CRUCERO RD	2200	2	580	0.90	644	0.30	6	0.02	3	0.01	3	0.391	0.37	B
CRUCERO RD	KELBAKER RD	2200	2	500	0.90	556	0.30	6	0.02	3	0.01	3	0.391	0.32	A
KELBAKER RD	ESSEX RD	2200	2	500	0.90	556	0.30	6	0.02	3	0.01	3	0.391	0.32	A
ESSEX RD	GOFFS RD	2200	2	500	0.90	556	0.30	6	0.02	3	0.01	3	0.391	0.32	A
GOFFS RD	MOUNTAIN SPRINGS RD	2200	2	440	0.90	489	0.30	6	0.02	3	0.01	3	0.391	0.28	A
MOUNTAIN SPRINGS	WATER RD	2200	2	420	0.90	467	0.30	6	0.02	3	0.01	3	0.391	0.27	A
WATER RD	JCT RTE 95 NORTH	2200	2	380	0.90	422	0.30	6	0.02	3	0.01	3	0.391	0.25	A
JCT RTE 95 NORTH	PARK RD	2200	2	440	0.90	489	0.30	6	0.02	3	0.01	3	0.391	0.28	A
PARK RD	RIVER RD	2200	2	420	0.90	467	0.30	6	0.02	3	0.01	3	0.391	0.27	A
RIVER RD	J ST	2200	2	380	0.90	422	0.30	6	0.02	3	0.01	3	0.391	0.25	A
J ST	JCT RTE 95 SOUTH	2200	2	420	0.90	467	0.30	6	0.02	3	0.01	3	0.391	0.27	A
JCT RTE 95 SOUTH	FIVE MILE RD	2200	2	360	0.90	400	0.30	6	0.02	3	0.01	3	0.391	0.23	A
FIVE MILE RD	PARK MOABI RD	2200	2	370	0.90	411	0.30	6	0.02	3	0.01	3	0.391	0.24	A
PARK MOABI RD	ARIZONA STATE LINE	2200	2	360	0.90	400	0.30	6	0.02	3	0.01	3	0.391	0.23	A

December 27, 2000
08-SBD-40 0.0/R154.64
FILENAME: 40EBAM_00.xls

2000 SAN BERNARDINO COUNTY CMP
(Based on 1999 Counts)
ROUTE 40 EASTBOUND AM

Basic Freeway Segments		Capacity	No. Lanes	Volume	Factor	Volume	Table 3-4		Table 3-7		Table 3-8				Table 3-1 (for 70 mph)
From	To	C(j)	N	V	PHF	SF	P(t)	E(t)	P(r)	E(r)	P(b)	E(b)	f(HV)	V/C	LOS
JCT RTE 15 EAST	MONTARA AVE	2200	2	750	0.90	833	0.30	6	0.02	3	0.01	3	0.391	0.48	B
MONTARA AVE	MAIN ST	2200	2	900	0.90	1000	0.30	6	0.02	3	0.01	3	0.391	0.58	C
MAIN ST	NEBO ST	2200	2	1020	0.90	1133	0.30	6	0.02	3	0.01	3	0.391	0.66	C
NEBO ST	A ST	2200	2	1020	0.90	1133	0.30	6	0.02	3	0.01	3	0.391	0.66	C
A ST	AIRPORT RD	2200	2	930	0.90	1033	0.30	6	0.02	3	0.01	3	0.391	0.60	C
AIRPORT RD	WEST NEWBERRY RD	2200	2	900	0.90	1000	0.30	6	0.02	3	0.01	3	0.391	0.58	C
WEST NEWBERRY RD	FORT CADY RD	2200	2	840	0.90	933	0.30	6	0.02	3	0.01	3	0.391	0.54	B
FORT CADY RD	HECTOR RD	2200	2	870	0.90	967	0.30	6	0.02	3	0.01	3	0.391	0.56	C
HECTOR RD	CRUCERO RD	2200	2	870	0.90	967	0.30	6	0.02	3	0.01	3	0.391	0.56	C
CRUCERO RD	KELBAKER RD	2200	2	750	0.90	833	0.30	6	0.02	3	0.01	3	0.391	0.48	B
KELBAKER RD	ESSEX RD	2200	2	750	0.90	833	0.30	6	0.02	3	0.01	3	0.391	0.48	B
ESSEX RD	GOFFS RD	2200	2	750	0.90	833	0.30	6	0.02	3	0.01	3	0.391	0.48	B
GOFFS RD	MOUNTAIN SPRINGS RD	2200	2	660	0.90	733	0.30	6	0.02	3	0.01	3	0.391	0.43	B
MOUNTAIN SPRINGS	WATER RD	2200	2	630	0.90	700	0.30	6	0.02	3	0.01	3	0.391	0.41	B
WATER RD	JCT RTE 95 NORTH	2200	2	580	0.90	644	0.30	6	0.02	3	0.01	3	0.391	0.37	B
JCT RTE 95 NORTH	PARK RD	2200	2	660	0.90	733	0.30	6	0.02	3	0.01	3	0.391	0.43	B
PARK RD	RIVER RD	2200	2	630	0.90	700	0.30	6	0.02	3	0.01	3	0.391	0.41	B
RIVER RD	J ST	2200	2	580	0.90	644	0.30	6	0.02	3	0.01	3	0.391	0.37	B
J ST	JCT RTE 95 SOUTH	2200	2	630	0.90	700	0.30	6	0.02	3	0.01	3	0.391	0.41	B
JCT RTE 95 SOUTH	FIVE MILE RD	2200	2	530	0.90	589	0.30	6	0.02	3	0.01	3	0.391	0.34	B
FIVE MILE RD	PARK MOABI RD	2200	2	560	0.90	622	0.30	6	0.02	3	0.01	3	0.391	0.36	B
PARK MOABI RD	ARIZONA STATE LINE	2200	2	540	0.90	600	0.30	6	0.02	3	0.01	3	0.391	0.35	B

November 14, 2000
08-SBD-60 PM 0.0 / R9.96
FILENAME: SBD60PHV__00.XLS

2000 SAN BERNARDINO COUNTY CMP
(Based on 1999 Counts)
ROUTE 60 PEAK HOUR VOLUMES

Basic Freeway Segments		PM PEAK HOUR VOLUME					AM PEAK HOUR VOLUME				
		TWO-WAY	EASTBOUND		WESTBOUND		Two-way	WESTBOUND		EASTBOUND	
FROM	TO	Volume	DS	VOL.	DS	VOL.	Volume	DS	VOL.	DS	VOL.
LA COUNTY LINE	RAMONA AVENUE	12800	55.0	7040	45.0	5760	12800	55.0	7040	45.0	5760
RAMONA AVENUE	CENTRAL AVENUE	14400	55.0	7920	45.0	6480	14400	55.0	7920	45.0	6480
CENTRAL AVENUE	MOUNTAIN AVENUE	15000	55.0	8250	45.0	6750	15000	55.0	8250	45.0	6750
MOUNTAIN AVENUE	JCT RTE 83/EUCLID AVE	15500	55.0	8530	45.0	6970	15500	55.0	8530	45.0	6970
JCT RTE 83/EUCLID AVE	GROVE AVENUE	16100	55.0	8860	45.0	7240	16100	55.0	8860	45.0	7240
GROVE AVENUE	VINEYARD AVENUE	15800	55.0	8690	45.0	7110	15800	55.0	8690	45.0	7110
VINEYARD AVENUE	ARCHIBALD AVENUE	16000	55.0	8800	45.0	7200	16000	55.0	8800	45.0	7200
ARCHIBALD AVENUE	HAVEN AVENUE	15800	55.0	8690	45.0	7110	15800	55.0	8690	45.0	7110
HAVEN AVENUE	RIV CO LINE	15400	55.0	8470	45.0	6930	15400	55.0	8470	45.0	6930

November 14, 2000
08-SBD-60 PM 0.0 / R9.96
FILENAME: 60EBPM_00.XLS

2000 SAN BERNARDINO COUNTY CMP
(Based on 1999 Counts)
ROUTE 60 EASTBOUND PM

BASIC FREEWAY SEGMENTS		Capacity	No. Lanes	Volume	Factor	Volume	Table 3-4		Table 3-7		Table 3-8				Table 3-1 (for 70 mph)
From	To	C(j)	N	V	PHF	SF	P(t)	E(t)	P(r)	E(r)	P(b)	E(b)	f(HV)	V/C	LOS
LA COUNTY LINE	RAMONA AVENUE	2200	4	7040	0.90	7822	0.07	1.5	0.02	1.2	0.01	1.5	0.958	0.93	E
RAMONA AVENUE	CENTRAL AVENUE	2200	5	7920	0.80	9900	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.93	E
CENTRAL AVENUE	MOUNTAIN AVENUE	2200	5	8250	0.80	10313	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.97	E
MOUNTAIN AVENUE	JCT RTE 83/EUCLID AVE	2200	5	8530	0.85	10035	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.94	E
JCT RTE 83/EUCLID AVE	GROVE AVENUE	2200	5	8860	0.85	10424	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.98	E
GROVE AVENUE	VINEYARD AVENUE	2200	5	8690	0.85	10224	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.96	E
VINEYARD AVENUE	ARCHIBALD AVENUE	2200	5	8800	0.85	10353	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.97	E
ARCHIBALD AVENUE	HAVEN AVENUE	2200	5	8690	0.85	10224	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.96	E
HAVEN AVENUE	RIV CO LINE	2200	4	8470	0.95	8916	0.05	1.5	0.02	1.2	0.01	1.5	0.967	1.05	F

November 14, 2000
08-SBD-60 PM 0.0 / R9.96
FILENAME: 60WBPM_00.XLS

2000 SAN BERNARDINO COUNTY CMP
(Based on 1999 Counts)
ROUTE 60 WESTBOUND PM

Basic Freeway Segments		Capacity	No. Lanes	Volume	Factor	Volume	Table 3-4		Table 3-7		Table 3-8				Table 3-1 (for 70 mph)
From	To	C(j)	N	V	PHF	SF	P(t)	E(t)	P(r)	E(r)	P(b)	E(b)	f(HV)	V/C	LOS
LA COUNTY LINE	RAMONA AVENUE	2200	5	5760	0.80	7200	0.07	1.5	0.02	1.2	0.01	1.5	0.958	0.68	C
RAMONA AVENUE	CENTRAL AVENUE	2200	5	6480	0.80	8100	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.76	D
CENTRAL AVENUE	MOUNTAIN AVENUE	2200	5	6750	0.80	8438	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.79	D
MOUNTAIN AVENUE	JCT RTE 83/EUCLID AVE	2200	5	6970	0.80	8713	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.82	D
JCT RTE 83/EUCLID AVE	GROVE AVENUE	2200	4	7240	0.96	7542	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.89	D
GROVE AVENUE	VINEYARD AVENUE	2200	4	7110	0.95	7484	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.88	D
VINEYARD AVENUE	ARCHIBALD AVENUE	2200	4	7200	0.95	7579	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.89	D
ARCHIBALD AVENUE	HAVEN AVENUE	2200	4	7110	0.95	7484	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.88	D
HAVEN AVENUE	RIV CO LINE	2200	4	6930	0.95	7295	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.86	D

November 14, 2000
08-SBD-60 PM 0.0 / R9.96
FILENAME: 60WBAM_00.XLS

2000 SAN BERNARDINO COUNTY CMP
(Based on 1999 Counts)
ROUTE 60 WESTBOUND AM

Basic Freeway Segments		Capacity	No. Lanes	Volume	Factor	Volume	Table 3-4		Table 3-7		Table 3-8				Table 3-1 (for 70 mph)
From	To	C(j)	N	V	PHF	SF	P(t)	E(t)	P(r)	E(r)	P(b)	E(b)	f(HV)	V/C	LOS
LA COUNTY LINE	RAMONA AVENUE	2200	5	7040	0.80	8800	0.07	3.0	0.02	1.2	0.01	1.5	0.870	0.92	E
RAMONA AVENUE	CENTRAL AVENUE	2200	5	7920	0.80	9900	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.93	E
CENTRAL AVENUE	MOUNTAIN AVENUE	2200	5	8250	0.80	10313	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.97	E
MOUNTAIN AVENUE	JCT RTE 83/EUCLID AVE	2200	5	8530	0.80	10663	0.05	1.5	0.02	1.2	0.01	1.5	0.967	1.00	E
JCT RTE 83/EUCLID AVE	GROVE AVENUE	2200	4	8860	0.96	9229	0.05	1.5	0.02	1.2	0.01	1.5	0.967	1.08	F
GROVE AVENUE	VINEYARD AVENUE	2200	4	8690	0.95	9147	0.05	1.5	0.02	1.2	0.01	1.5	0.967	1.07	F
VINEYARD AVENUE	ARCHIBALD AVENUE	2200	4	8800	0.95	9263	0.05	1.5	0.02	1.2	0.01	1.5	0.967	1.09	F
ARCHIBALD AVENUE	HAVEN AVENUE	2200	4	8690	0.95	9147	0.05	1.5	0.02	1.2	0.01	1.5	0.967	1.07	F
HAVEN AVENUE	RIV CO LINE	2200	4	8470	0.95	8916	0.05	1.5	0.02	1.2	0.01	1.5	0.967	1.05	F

November 14, 2000
08-SBD-60 PM 0.0 / R9.96
FILENAME: 60EBAM_00.XLS

2000 SAN BERNARDINO COUNTY CMP
(Based on 1999 Counts)
ROUTE 60 EASTBOUND AM

Basic Freeway Segments		Capacity	No. Lanes	Volume	Factor	Volume	Table 3-4		Table 3-7		Table 3-8				Table 3-1 (for 70 mph)
From	To	C(j)	N	V	PHF	SF	P(t)	E(t)	P(r)	E(r)	P(b)	E(b)	f(HV)	V/C	LOS
LA COUNTY LINE	RAMONA AVENUE	2200	4	5760	0.90	6400	0.07	1.5	0.02	1.2	0.01	1.5	0.958	0.76	D
RAMONA AVENUE	CENTRAL AVENUE	2200	5	6480	0.80	8100	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.76	D
CENTRAL AVENUE	MOUNTAIN AVENUE	2200	5	6750	0.80	8438	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.79	D
MOUNTAIN AVENUE	JCT RTE 83/EUCLID AVE	2200	5	6970	0.85	8200	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.77	D
JCT RTE 83/EUCLID AVE	GROVE AVENUE	2200	5	7240	0.85	8518	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.80	D
GROVE AVENUE	VINEYARD AVENUE	2200	5	7110	0.85	8365	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.79	D
VINEYARD AVENUE	ARCHIBALD AVENUE	2200	5	7200	0.85	8471	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.80	D
ARCHIBALD AVENUE	HAVEN AVENUE	2200	5	7110	0.85	8365	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.79	D
HAVEN AVENUE	RIV CO LINE	2200	4	6930	0.95	7295	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.86	D

November 14, 2000
08-SBD-215 0.00/17.75
FILENAME: RIV215PHV_00.

2000 SAN BERNARDINO COUNTY CMP
(Based on 1999 Counts)
ROUTE 215 PEAK HOUR VOLUMES

Basic Freeway Segments		PM PEAK HOUR VOLUME					AM PEAK HOUR VOLUME				
From	To	Two-Way	NORTHBOUND		SOUTHBOUND		Two-Way	SOUTHBOUND		NORTHBOUND	
		Volume	DS	VOL.	DS	VOL.	Volume	DS		DS	VOL.
RIV CO LINE	IOWA AVENUE	11700	47.5	5560	52.5	6140	11700	47.5	5560	52.5	6140
IOWA AVENUE	BARTON ROAD	11900	47.5	5650	52.5	6250	11900	47.5	5650	52.5	6250
BARTON ROAD	WASHINGTON AVENUE	12100	47.5	5750	52.5	6350	12100	47.5	5750	52.5	6350
WASHINGTON AVENUE	JCT. RTE 10	12800	47.5	6080	52.5	6720	12800	47.5	6080	52.5	6720
JCT. RTE 10	ORANGE SHOW ROAD	13700	50.0	6850	50.0	6850	13700	50.0	6850	50.0	6850
ORANGE SHOW ROAD	INLAND CENTER DRIVE	12900	50.0	6450	50.0	6450	12900	50.0	6450	50.0	6450
INLAND CENTER DRIVE	MILL STREET	12200	50.0	6100	50.0	6100	12200	50.0	6100	50.0	6100
MILL STREET	SECOND STREET	12200	50.0	6100	50.0	6100	12200	50.0	6100	50.0	6100
SECOND STREET	JCT. RTE 66	11300	50.0	5650	50.0	5650	11300	50.0	5650	50.0	5650
JCT. RTE 66	BASELINE STREET	10800	55.0	5940	45.0	4860	10800	55.0	5940	45.0	4860
BASELINE STREET	JCT. RTE 259	9600	55.0	5280	45.0	4320	9600	55.0	5280	45.0	4320
JCT. RTE 259	MASSACHUSETTS AVE	4850	58.0	2810	42.0	2040	4850	58.0	2810	42.0	2040
MASSACHUSETTS AVE.	HIGHLAND AVE.	4850	58.0	2810	42.0	2040	4850	58.0	2810	42.0	2040
HIGHLAND AVE.	Mt. VERNON/27th St	4700	58.0	2730	42.0	1970	4700	58.0	2730	42.0	1970
Mt. VERNON/27th St.	JCT. RTE. 30	4100	58.0	2380	42.0	1720	4100	58.0	2380	42.0	1720
JCT. RTE. 30	UNIVERSITY PARKWAY	5300	60.0	3180	40.0	2120	5300	60.0	3180	40.0	2120
UNIVERSITY PARKWAY	PALM AVE	3750	60.0	2250	40.0	1500	3750	60.0	2250	40.0	1500
PALM AVE	DEVORE ROAD	3950	60.0	2370	40.0	1580	3950	60.0	2370	40.0	1580
DEVORE ROAD	JCT. RTE 15	3500	60.0	2100	40.0	1400	3500	60.0	2100	40.0	1400

November 14, 2000
08-SBD-215 0.00/17.75
FILENAME: 215SBPM_00.XLS

2000 SAN BERNARDINO COUNTY CMP
(Based on 1999 Counts)
ROUTE 215 SOUTBOUND PM

Basic Freeway Segments		Capacity	No. Lanes	Volume	Factor	Volume	Table 3-4		Table 3-7		Table 3-8				Table 3-1 (for 70 mph)
From	To	C(j)	N	V	PHF	SF	P(t)	E(t)	P(r)	E(r)	P(b)	E(b)	f(HV)	V/C	LOS
RIV CO LINE	IOWA AVENUE	2200	3	6140	0.97	6330	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.99	E
IOWA AVENUE	BARTON ROAD	2200	3	6250	0.95	6579	0.05	2.5	0.02	1.2	0.01	2.5	0.914	1.09	F
BARTON ROAD	WASHINGTON AVENUE	2200	3	6350	0.95	6684	0.05	2.5	0.02	1.2	0.01	2.5	0.914	1.11	F
WASHINGTON AVENUE	JCT. RTE 10	2200	4	6720	0.95	7074	0.05	2.5	0.02	1.5	0.01	2.5	0.909	0.88	D
JCT. RTE 10	ORANGE SHOW ROAD	2200	4	6850	0.95	7211	0.05	1.5	0.02	1.5	0.01	1.5	0.962	0.85	D
ORANGE SHOW ROAD	INLAND CENTER DRIVE	2200	4	6450	0.95	6789	0.05	1.5	0.02	1.5	0.01	1.5	0.962	0.80	D
INLAND CENTER DRIVE	MILL STREET	2200	3	6100	0.96	6354	0.05	1.5	0.02	1.2	0.01	1.5	0.967	1.00	E
MILL STREET	SECOND STREET	2200	4	6100	0.80	7625	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.90	E
SECOND STREET	JCT. RTE 66	2200	3	5650	0.95	5947	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.93	E
JCT. RTE 66	BASELINE STREET	2200	3	4860	0.95	5116	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.80	D
BASELINE STREET	JCT. RTE 259	2200	3	4320	0.95	4547	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.71	C
JCT. RTE 259	MASSACHUSETTS AVENUE	2200	2	2040	0.95	2147	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.50	B
MASSACHUSETTS AVE.	HIGHLAND AVE.	2200	2	2040	0.95	2147	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.50	B
HIGHLAND AVE.	TWENTY-SEVENTH ST.	2200	2	1970	0.95	2074	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.49	B
TWENTY-SEVENTH ST.	JCT. RTE. 30	2200	2	1720	0.95	1811	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.43	B
JCT. RTE. 30	UNIVERSITY PARKWAY	2200	2	2120	0.95	2232	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.52	B
UNIVERSITY PARKWAY	PALM AVE	2200	2	1500	0.95	1579	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.37	B
PALM AVE	DEVORE ROAD	2200	2	1580	0.95	1663	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.39	B
DEVORE ROAD	JCT. RTE 15	2200	2	1400	0.95	1474	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.35	B

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2000 SAN BERNARDINO COUNTY CMP
(Based on 1999 Counts)
ROUTE 215 NORTHBOUND PM

Basic Freeway Segments			No. Lanes				Table 3-4		Table 3-7		Table 3-8				Table 3-1 (for 70 mph)
From	To	C(j)	N	V	PHF	SF	P(t)	E(t)	P(r)	E(r)	P(b	E(b)	f(HV)	V/C	LOS
RIV CO LINE	IOWA AVENUE	2200	3	5560	0.97	5732	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.90	E
IOWA AVENUE	BARTON ROAD	2200	3	5650	0.95	5947	0.05	2.5	0.02	1.5	0.01	2.5	0.909	0.99	E
BARTON ROAD	WASHINGTON AVENUE	2200	3	5750	0.95	6053	0.05	2.5	0.02	1.5	0.01	2.5	0.909	1.01	F
WASHINGTON AVENUE	JCT. RTE 10	2200	4	6080	0.95	6400	0.05	2.5	0.02	1.5	0.01	2.5	0.909	0.80	D
JCT. RTE 10	ORANGE SHOW ROAD	2200	4	6850	0.95	7211	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.85	D
ORANGE SHOW ROAD	INLAND CENTER DRIVE	2200	4	6450	0.95	6789	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.80	D
INLAND CENTER DRIVE	MILL STREET	2200	3	6100	0.95	6421	0.05	1.5	0.02	1.2	0.01	1.5	0.967	1.01	F
MILL STREET	SECOND STREET	2200	4	6100	0.80	7625	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.90	E
SECOND STREET	JCT. RTE 66	2200	3	5650	0.95	5947	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.93	E
JCT. RTE 66	BASELINE STREET	2200	3	5940	0.95	6253	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.98	E
BASELINE STREET	JCT. RTE 259	2200	3	5280	0.95	5558	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.87	D
JCT. RTE 259	MASSACHUSETTS AVENUE	2200	2	2810	0.95	2958	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.70	C
MASSACHUSETTS AVE.	HIGHLAND AVE.	2200	2	2810	0.95	2958	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.70	C
HIGHLAND AVE.	TWENTY-SEVENTH STREET	2200	2	2730	0.95	2874	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.68	C
TWENTY-SEVENTH ST.	JCT. RTE. 30	2200	2	2380	0.95	2505	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.59	C
JCT. RTE. 30	UNIVERSITY PARKWAY	2200	2	3180	0.95	3347	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.79	D
UNIVERSITY PARKWAY	PALM AVE	2200	2	2250	0.95	2368	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.56	C
PALM AVE	DEVORE ROAD	2200	2	2370	0.95	2495	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.59	C
DEVORE ROAD	JCT. RTE 15	2200	2	2100	0.95	2211	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.52	B

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2000 SAN BERNARDINO COUNTY CMP
(Based on 1999 Counts)
ROUTE 215 NORTHBOUND AM

Basic Freeway Segments		Capacity	No. Lanes	Volume	Factor	Volume	Table 3-4		Table 3-7		Table 3-8				(for 70 mph)
From	To	C(j)	N	V	PHF	SF	P(t)	E(t)	P(r)	E(r)	P(b)	E(b)	f(HV)	V/C	LOS
RIV CO LINE	IOWA AVENUE	2200	3	6140	0.96	6396	0.05	1.5	0.02	1.2	0.01	1.5	0.967	1.00	E
IOWA AVENUE	BARTON ROAD	2200	3	6250	0.95	6579	0.05	2.5	0.02	1.5	0.01	2.5	0.909	1.10	F
BARTON ROAD	WASHINGTON AVENUE	2200	3	6350	0.95	6684	0.05	2.5	0.02	1.5	0.01	2.5	0.909	1.11	F
WASHINGTON AVENUE	JCT. RTE 10	2200	4	6720	0.95	7074	0.05	2.5	0.02	1.5	0.01	2.5	0.909	0.88	D
JCT. RTE 10	ORANGE SHOW ROAD	2200	4	6850	0.95	7211	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.85	D
ORANGE SHOW ROAD	INLAND CENTER DRIVE	2200	4	6450	0.95	6789	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.80	D
INLAND CENTER DRIVE	MILL STREET	2200	3	6100	0.97	6289	0.05	1.2	0.02	1.2	0.01	1.5	0.981	0.97	E
MILL STREET	SECOND STREET	2200	4	6100	0.80	7625	0.05	1.2	0.02	1.2	0.01	1.5	0.981	0.88	D
SECOND STREET	JCT. RTE 66	2200	3	5650	0.95	5947	0.05	1.2	0.02	1.2	0.01	1.5	0.981	0.92	E
JCT. RTE 66	BASELINE STREET	2200	3	4860	0.95	5116	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.80	D
BASELINE STREET	JCT. RTE 259	2200	3	4320	0.95	4547	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.71	C
JCT. RTE 259	MASSACHUSETTS AVENUE	2200	2	2040	0.95	2147	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.50	B
MASSACHUSETTS AVE.	HIGHLAND AVE.	2200	2	2040	0.95	2147	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.50	B
HIGHLAND AVE.	TWENTY-SEVENTH ST.	2200	2	1970	0.95	2074	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.49	B
TWENTY-SEVENTH ST.	JCT. RTE. 30	2200	2	1720	0.95	1811	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.43	B
JCT. RTE 30	UNIVERSITY PARKWAY	2200	2	2120	0.95	2232	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.52	B
UNIVERSITY PARKWAY	PALM AVE	2200	2	1500	0.95	1579	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.37	B
PALM AVE	DEVORE ROAD	2200	2	1580	0.95	1663	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.39	B
DEVORE ROAD	JCT. RTE 15	2200	2	1400	0.95	1474	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.35	B

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2000 SAN BERNARDINO COUNTY CMP
(Based on 1999 Counts)
ROUTE 215 SOUTHBOUND AM

Basic Freeway Segments		Capacity	No. Lanes	Volume	Factor	Volume	Table 3-4		Table 3-7		Table 3-8				Table 3-1 (for 70 mph)
From	To	C(j)	N	V	PHF	SF	P(t)	E(t)	P(r)	E(r)	P(b)	E(b)	f(HV)	V/C	LOS
RIV CO LINE	IOWA AVENUE	2200	3	5560	0.95	5853	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.92	E
IOWA AVENUE	BARTON ROAD	2200	3	5650	0.95	5947	0.05	2.5	0.02	1.5	0.01	2.5	0.909	0.99	E
BARTON ROAD	WASHINGTON AVENUE	2200	3	5750	0.95	6053	0.05	2.5	0.02	1.5	0.01	2.5	0.909	1.01	F
WASHINGTON AVENUE	JCT. RTE 10	2200	4	6080	0.95	6400	0.05	2.5	0.02	1.5	0.01	2.5	0.909	0.80	D
JCT. RTE 10	ORANGE SHOW ROAD	2200	4	6850	0.95	7211	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.85	D
ORANGE SHOW ROAD	INLAND CENTER DRIVE	2200	4	6450	0.95	6789	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.80	D
INLAND CENTER DRIVE	MILL STREET	2200	3	6100	0.97	6289	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.99	E
MILL STREET	SECOND STREET	2200	4	6100	0.80	7625	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.90	E
SECOND STREET	JCT. RTE 66	2200	3	5650	0.95	5947	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.93	E
JCT. RTE 66	BASELINE STREET	2200	3	5940	0.95	6253	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.98	E
BASELINE STREET	JCT. RTE 259	2200	3	5280	0.95	5558	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.87	D
JCT. RTE 259	MASSACHUSETTS AVENUE	2200	2	2810	0.95	2958	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.70	C
MASSACHUSETTS AVE.	HIGHLAND AVE.	2200	2	2810	0.95	2958	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.70	C
HIGHLAND AVE.	TWENTY-SEVENTH ST.	2200	2	2730	0.95	2874	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.68	C
TWENTY-SEVENTH ST.	JCT. RTE. 30	2200	2	2380	0.95	2505	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.59	C
JCT. RTE. 30	UNIVERSITY PARKWAY	2200	2	3180	0.95	3347	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.79	D
UNIVERSITY PARKWAY	PALM AVE	2200	2	2250	0.95	2368	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.56	C
PALM AVE	DEVORE ROAD	2200	2	2370	0.95	2495	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.59	C
DEVORE ROAD	JCT. RTE 15	2200	2	2100	0.95	2211	0.05	1.5	0.02	1.2	0.01	1.5	0.967	0.52	B

Table A-6

SAN BERNARDINO COUNTY CMP
TWO LANE AND MULTILANE HIGHWAY
LEVEL OF SERVICE

Year 2000 San Bernardino County Two Lane and Multilane Highway LOS
(Based on 1999 Traffic Count)

Segment	PM-PM	Total Lane	Terrain	Area Type	% of No Passing	Two Way Volume (ADT)	% of Heavy Vehicle	Design Speed	Peak Hour Volume	Lane Width	Shder Width	Dir. Split.	% RV	LOS
SR-02														
County Line-Lone Pine Rd.	0.00 / 1.73	2	M	Rural	60	4,700	5	60	610	11	2	55-45	1	E
Lone Pine Rd.-Jct. Rte.138	1.73 / 6.36	2	M	Rural	60	4,700	5	60	560	12	0	55-45	1	E
SR-18														
Jct. Rte. 30-Waterman Cyn Rd.	T6.18 / R13.29	4	M	Rural	60	19,680	5	60	1,840	12	0	55-45	1	C
Waterman Cyn Rd.-Jct. Rte 138	R13.29 / R17.73	4	M	Rural	60	16,000	5.0	60	1,970	12	0	55-45	1	C
Jct. Rte 138-Jct. Rte. 189 N.	R17.73 / 20.61	2	M	Rural	60	9,000	5.0	60	900	12	0	55-45	1	E
Jct. Rte.189 N.- Rte. 330 S.	20.61 / 31.90	2	M	Rural	60	8,440	5.0	60	930	12	3	55-45	1	E
Rte. 330 S.-Blue Jay Rd.	31.90 / 46.55	2	M	Rural	60	8,430	5.0	60	1,160	11	0	60-40	1	E
Blue Jay Rd.-Lake View Dr.	46.55 / 48.36	2	M	Rural	60	11,000	5.0	60	1,300	12	1	60-40	1	E
Lake View Dr.-Standfield Cutoff	48.36 / 51.61	4	R	Suburb	40	16,900	5.0	60	2,025	12	1	60-40	1	C
Standfield Cutoff-Jct. Rte. 38 E.	51.61 / 53.92	2	R	Suburb	40	9,000	5	60	990	12	1	60-40	1	E
Jct. Rte. 38 E.- North Shore Rd.	53.92 / 54.54	2	M	Suburb	60	4,800	5.0	60	480	11	0	55-45	1	C
North Shore Rd.-Jct. Rte. 247	54.54 / 73.78	2	R	Rural	40	4,000	10	60	390	12	2	55-45	1	D
Jct. Rte. 247-Central Ave.	73.78 / 87.87	2	R	Rural	20	10,500	8	60	1,010	12	4	55-45	1	E
Central Ave.-E. Cahuenga	87.87 / 98.72	4	F	Suburb	40	34,900	5	60	3,310	12	8	55-45	1	D

Year 2000 San Bernardino County Two Lane and Multilane Highway LOS
(Based on 1999 Traffic Count)

Segment	PM-PM	Total Lane	Terrain	Area Type	% of No Passing	Two Way Volume (ADT)	% of Heavy Vehicle	Design Speed	Peak Hour Volume	Lane Width	Shder Width	Dir. Split.	% RV	LOS
E. Cahuenga-Jct. Rte. 395	98.72 / 100.96	2	F	Sub/Rur	100	8,800	5	60	880	12	8	55-45	1	D
Jct. Rte. 395-LA County Line	100.96 / 115.91	2	F	Sub/Rur	20	5,700	5	60	570	12	0	55-45	1	D
SR-38														
Jct. Rte. 10-Crafton Ave.	0.00 / 4.07	2	F	Suburb	60	11,800	5	60	1,330	12	8	55-45	1	E
Crafton Ave.-Two Lakes Rd.	4.07 / 25.38	2	M	Rural	60	3,650	5.0	60	380	12	10	55-45	1	D
Two Lakes Rd.-Santa Ana Br.	25.38 / 30.86	2	M	Rural	60	1,900	5.0	60	350	13	0	60-40	1	D
Santa Ana Br.-Jct. Rte. 18	30.86 / 49.52	2	M	Rural	60	7,000	5.0	60	935	13	0	60-40	1	E
Jct. Rte. 18-Big Bear Dam.	49.52 / 59.40	2	R	Suburb	40	10,250	8.0	50	850	10	1	60-40	1	E
SR-58														
County Line-Jct. Rte. 395	R0.00 / 5.40	2	F	Rural	20	12,500	15	60	1,000	12	5	55-45	1	D
Jct. Rte. 395-Lynwood Rd.	5.40 / R30.39	2	F	Rural	20	6,450	15	60	1,015	12	5	55-45	1	D
SR-71 (Now a Freeway)														
County Line-Soquel Canyon	0.00 /R4.89	6	R	Rural	0	37,000	5	60	2,850	12	0	55-45	1	C
Soquel Canyon-Jct. Rte. 83	R4.89/ 8.08	4	R	Rural	0	35,300	5	60	2,720	12	8	55-45	1	C
SR-95														
County Line-Havasu Lake Rd.	0.00 / 37.30	2	F	Rural	20	2,500	9.0	60	240	11	0	55-45	1	B
Havasu Lake Rd.-Jct. Rte. 40 E.	37.30 / 57.27	2	R	Rural	40	2,700	9	60	345	11	0	55-45	1	C
Jct. Rte. 40 E.-Nevada State Line	57.27 / 80.45	2	R	Rural	40	2,800	8	60	240	12	0	55-45	1	C
SR-127														

Year 2000 San Bernardino County Two Lane and Multilane Highway LOS
(Based on 1999 Traffic Count)

Segment	PM-PM	Total Lane	Terrain	Area Type	% of No Passing	Two Way Volume (ADT)	% of Heavy Vehicle	Design Speed	Peak Hour Volume	Lane Width	Shder Width	Dir. Split.	% RV	LOS
Jct. Rte. 15-Saratoga Spring Rd.	0.00 / 29.71	2	R	Rural	40	950	5	60	190	12	0	55-45	1	B
SR-138														
County Line-Jct. Rte. 15	0.00 / R15.23	2	M	Rural	60	12,900	7.0	50	1,240	11	5	55-45	1	E
Jct. Rte. 15-Cleghorn Cyn. Rd.	R15.23 / R26.48	2	M	Rural	60	1,700	5	50	280	12	0	55-45	1	D
Cleghorn Cyn. Rd.-Waters Dr.	R26.48 / 35.74	2	M	Rural	60	1,140	5	50	150	12	8	60-40	1	C
Waters Dr.-Knapps Cutoff	35.74 / 36.27	2	R	Suburb	40	6,000	5	50	700	10	0	60-40	1	E
Knapps Cutoff-Jct. Rte.18	36.27 / R37.85	2	M	Suburb	40	7,000	5	50	570	11	0	60-40	1	E
SR-173														
Jt. Rte. 138-Arrowhead Lake Rd.	0.00 / L6.99	2	M	Rural	60	1,200	5.0	45	190	12	0	55-45	2	C
Arrowhead Lake Rd.-Hood Creek Rd.	L6.99 / 19.78	2	M	Rural	60	1,130	3.0	45	150	12	0	55-45	2	B
Hook Creek Rd.-Jct. Rte. 18	19.78 / 23.04	2	M	Suburb	60	5,320	3.0	45	700	12	0	55-45	2	E
SR189														
Jct. Rte. 18-Jct. Rte. 173	0.00 / 5.56	2	M	Suburb	60	4,720	3.0	40	510	12	2	55-45	2	D
SR247														
Jct. Rte. 62-Camp Rock Rd.	0.00 / 39.60	2	M	Rural	40	5,600	5.0	60	470	12	2	55-45	1	D
Camp Rock Rd.-Barstow City Limits	39.60 / 76.42	2	R	Suburb	20	2,050	8	60	220	12	8	55-45	1	B
Barstow City Limits-Jct. Rte. 15	76.42 / 78.10	4	R	Rural	60	16,200	3	50	1,550	12	2	55-45	4	B
SR-330														

Year 2000 San Bernardino County Two Lane and Multilane Highway LOS
(Based on 1999 Traffic Count)

Segment	PM-PM	Total Lane	Terrain	Area Type	% of No Passing	Two Way Volume (ADT)	% of Heavy Vehicle	Design Speed	Peak Hour Volume	Lane Width	Shder Width	Dir. Split.	% RV	LOS
Jct. Rte. 30-Jct. Rte. 18	28.70 / 44.12	2-4	M	Rural	60	11,000	4.0	60	1,300	12	2	60-40	1	E
SR-395														
Jct. Rte. 15-Jct. Rte 18	R3.98 / 11.18	2	R	Rural	40	13,500	17.7	55	1,200	12	6	55-45	1	E
Jct. Rte.18-El Mirage Rd.	11.18 / 17.77	2	R	Rural	40	14,150	17.5	60	1,170	12	8	55-45	1	E
El Mirage Rd.-County Line	17.77 / 73.52	2	R	Rural	40	5,900	16.0	60	510	12	6	55-45	1	C

APPENDIX B

CONGESTION MANAGEMENT PROGRAM
GOVERNMENT CODE SECTION

APPENDIX B

CONGESTION MANAGEMENT PROGRAM GOVERNMENT CODE SECTIONS

The following State of California Government Code sections represent the state of CMP law as of December 2001. These Government Code sections provide the framework for development of CMP's throughout the State.

Chapter 2.3 Long-Range Transportation Planning

Section

§ 65070. [No title.]

(A) The Legislature finds and declares, consistent with Section 65088, that it is in the interest of the State of California to have an integrated state and regional transportation planning process. It further finds that federal law mandates the development of a state and regional long-range transportation plan as a prerequisite for receipt of federal transportation funds. It is the intent of the Legislature that the preparation of these plans shall be a cooperative process involving local and regional government, transit operators, congestion management agencies, and the goods movement industry and that the process be a continuation of activities performed by each entity and be performed without any additional cost.

(C) The Legislature further finds and declares that the Transportation Blueprint for the Twenty-First Century (Chapters 105 and 106 of the Statutes of 1989) is a long-range state transportation plan that includes a financial plan and a continuing planning process through the preparation of congestion management plans and regional transportation plans, and identifies major interregional road networks and passenger rail corridors for the State.

§ 65072. [No title.]

The California Transportation Plan shall include all of the following:

(A) A policy element that describes the state's transportation policies and system performance objectives. These policies and objectives shall be consistent with legislative intent described in Sections 14000, 14000.5, and 65088. For the plan to be submitted in December 1993, the policy element shall address any opportunities for changes or additions to state legislative policy direction or statute.

Chapter 2.5 Transportation Planning and Programming

Section

§ 65081. Contents of plan.

The regional transportation plan shall include:

(b) An action element that describes the programs and actions necessary to implement the plan and assigns implementation responsibilities. The action element shall also include a program for developing intracity and intercity bicycle programs. The action element shall include all congestion management programs adopted pursuant to Chapter 2.6 (commencing with Section 65088).

§ 65082. Seven-year regional transportation improvement program.

(b) Congestion Management Programs adopted pursuant to Section 65089 shall be incorporated into the regional transportation improvement program submitted to the commission by December 1, 1991, and every two years thereafter.

(c) The incorporation of the Congestion Management Program into the regional transportation improvement program required to be submitted to the commission by December 1, 1991, may be delayed for a period not to exceed one year if an environmental impact report is required to be prepared for the congestion management program pursuant to Division 13 (commencing with Section 21000) of the Public Resources Code, and the following conditions are met:

(1) The agency, as defined by Section 65088.1, adopts written findings that the congestion management program cannot be incorporated into the regional transportation improvement program by December 1, 1991, due to the time required to prepare an environmental impact report pursuant to Division 13 (commencing with Section 21000) of the Public Resources Code.

(2) The agency adopts a schedule for development of the congestion management program that will result in its adoption no later than December 1, 1992, and submits a report to the Legislature by July 1, 1992, on the progress of complying with this section.

(3) The agency, county, and cities take every action necessary to assure that the congestion management program will be adopted by December 1, 1992.

(d) If the incorporation of the congestion management program into the regional transportation improvement program is delayed pursuant to subdivision (c), both of the following shall apply:

(1) Any project included in the state transportation improvement program or the traffic systems management program prior to December 1, 1992, which is otherwise required to be included in the congestion management

program, pursuant to subdivision (e), but which is not included in the congestion management program to be incorporated into the regional transportation improvement program pursuant to subdivision (b), shall be deleted from the state transportation improvement program or the traffic systems management program.

(2) Local projects which are otherwise required to be included in the congestion management program, pursuant to subdivision (e), may be included in the regional transportation improvement program to be submitted to the California Transportation Commission by December 1, 1991. Any local project which is included in the regional transportation improvement program after December 1, 1991, but prior to December 1, 1992, which is otherwise required to be included in the congestion management program, but which is not included in the congestion management program to be incorporated into the regional transportation improvement program pursuant to subdivision (b), shall be deleted from the regional transportation improvement program.

(e) Local projects not included in a congestion management program shall not be included in the regional transportation improvement program. Projects and programs adopted pursuant to subdivision (a) shall be consistent with the seven-year capital improvement program adopted pursuant to paragraph (5) of subdivision (b) of Section 65089, and the guidelines adopted pursuant to Section 14530.1.

Chapter 2.6 Congestion Management

§ 65088. Legislative findings

The Legislature finds and declares all of the following:

(a) Although California's economy is critically dependent upon transportation, its current transportation system relies primarily upon a street and highway system designed to accommodate far fewer vehicles than are currently using the system.

(b) California's transportation system is characterized by fragmented planning, both among jurisdictions involved and among the means of available transport.

(c) The lack of an integrated system and the increase in the number of vehicles are causing traffic congestion that each day results in 400,000 hours lost in traffic, 200 tons of pollutants released into the air we breathe, and three million one hundred thousand dollars ($3,100,000) added costs to the motoring public.

(d) To keep California moving, all methods and means of transport between major destinations must be coordinated to connect our vital economic and population centers.

(e) In order to develop the California economy to its full potential, it is intended that federal, state, and local agencies join with transit districts, business, private and environmental interests to develop and implement comprehensive strategies needed to develop appropriate responses to transportation needs.

§ 65088.1 Definitions

As used in this chapter the following terms have the following meanings:

(a) Unless the context requires otherwise, "regional agency" means the agency responsible for preparation of the regional transportation improvement program.

(b) Unless the context requires otherwise, "agency" means the agency responsible for the preparation and adoption of the congestion management program.

(c) "Commission" means the California Transportation Commission.

(d) "Department" means the Department of Transportation.

(e) “Local jurisdiction” means a city, a county, or a city and county.

(f) “Parking cash-out program" means an employer-funded program under which an employer offers to provide a cash allowance to an employee equivalent to the parking subsidy that the employer would otherwise pay to provide the employee with a parking space. "Parking subsidy" means the difference between the out-of-pocket amount paid by an employer on a regular basis in order to secure the availability of an employee parking space not owned by the employer and the price, if any, charged to an employee for use of that space. A parking cash-out program may include a requirement that employee participants certify that they will comply with the guidelines established by the employer designed to avoid neighborhood parking problems, with a provision that employees not complying with the guidelines will no longer be eligible for the cash-out program. "Parking cash-out program" means an employer-funded program under which an employer offers to provide a cash allowance to an employee equivalent to the parking subsidy that the employer would otherwise pay to provide the employee with a parking space. "Parking subsidy" means the difference between the out-of-pocket amount paid by an employer on a regular basis in order to secure the availability of an employee parking space not owned by the employer and the price, if any, charged to an employee for use of that space. A parking cash-out program may include a requirement that employee participants certify that they will comply with guidelines established by the employer designed to avoid neighborhood parking problems, with a provision that employees not complying with the guidelines will no longer be eligible for the parking cash-out program.

(g) "Urbanized area" has the same meaning as is defined in the 1990 federal census for urbanized areas of more than 50,000 population.

(h) "Interregional travel" means any trips that originate outside the boundary of the agency.

(i) “Multimodal” means the utilization of all available modes of travel that enhance the movement of people and goods, including, but not limited to, highway, transit, nonmotorized and demand management strategies including, but not limited to, telecommuting. The availability and practicality of specific multimodal systems, projects, and strategies varies by county and region in accordance with the size and complexity of different urbanized areas.

(j) “Level of service standard” is a threshold that defines a deficiency on the congestion management program highway and roadway system which requires the preparation of a deficiency plan. It is the intent of the Legislature that the agency shall use all elements of the program to implement strategies and actions that avoid the creation of deficiencies and to improve multimodal mobility.

§ 65088.3 Conditions to opt out of State Congestion Management Program requirements

This chapter does not apply in a county in which a majority of the local governments, collectively comprised of the city councils and the county board of supervisors, which in total also represent a majority of the population in the county, each adopt resolutions electing to be exempt from the congestion management program.

§ 65088.5 Compliance with federal congestion management system requirements

Congestion management programs, if prepared by county transportation commissions and transportation authorities created pursuant to Division 12 (commencing with Section 130000) of the Public Utilities Code, shall be used by the regional transportation planning agency to meet federal requirements for a congestion management system, and shall be incorporated into the congestion management system.

§ 65089. Program; contents; uniform data base on traffic impacts

(a) A congestion management program shall be developed, adopted, and updated biennially, consistent with the schedule for adopting and updating the regional transportation improvement program, for every county that includes an urbanized area, and shall include every city and the county. The program shall be adopted at a noticed public hearing of the agency. The Program shall be developed in consultation with, and with the cooperation of, the transportation planning agency, regional transportation providers, local governments, the department, and the air pollution control district or the air quality management district, either by the county transportation commission, or by another public agency, as designated by resolutions adopted by the county board of supervisors and the city councils of a majority of the cities representing a majority of the population in the incorporated area of the county.

(b) The program shall contain all of the following elements:

(1) (A) Traffic level of service standards established for a system of highways and roadways designated by the agency. The system shall include at a minimum all state highways and principal arterials. No highway or roadway designated as a part of the system shall be removed from the system. All new state highways and

principal arterials shall be designated as part of the system. Level of service (LOS) shall be measured by Circular 212, (or by the most recent version of the Highway Capacity Manual), or by a uniform methodology adopted by the agency which is consistent with the Highway Capacity Manual. The determination as to whether an alternative method is consistent with the Highway Capacity Manual shall be made by the regional agency, except that the department shall make this determination instead if either (I) the regional agency is also the agency, as those terms are defined in Section 65088.1, or (ii) the department is responsible for preparing the regional transportation improvement plan for the county.

(B) In no case shall the LOS standards established be below the level of service E or the current level, whichever is farthest from level of service A. When the level of service on a segment or at an intersection fails to attain the established level of service standard, a deficiency plan shall be adopted pursuant to Section 65089.4.

(2) A performance element that includes performance measures to evaluate current and future multimodal system performance for the movement of people and goods. At a minimum, these performance measures shall incorporate highway and roadway system performance, and measures established for the frequency and routing of public transit, and for the coordination of transit service provided by separate operators. These performance measures shall support mobility, air quality, land use, and economic objectives, and shall be used in the development of the capital improvement program required pursuant to paragraph (5), deficiency plans required pursuant to Section 65089.4, and the land use analysis program required pursuant to paragraph (4).

(3) A travel demand element that promotes alternative transportation methods, including, but not limited to, carpools, vanpools, transit, bicycles, and park-and-ride lots; improvements in the balance between jobs and housing; and other strategies, including, but not limited to, flexible work hours, telecommuting, and parking management programs. The agency shall consider parking cash-out programs during the development and update of the trip reduction and travel demand element.

(4) A program to analyze the impacts of land use decisions made by local jurisdictions on regional transportation systems, including an estimate of the costs associated with mitigating those impacts. This program shall measure, to the extent possible, the impact to the transportation system using the performance measures described in paragraph (2). In no case shall the program include an estimate of the costs of mitigating the impacts of interregional travel. The program shall provide credit for local public and private contributions to improvements to regional transportation systems. However, in the case of toll road facilities, credit shall only be allowed for local public and private contributions which are unreimbursed from toll revenues or other state or federal sources. The agency shall calculate the amount of the credit to be provided. The program defined under this section may require implementation through the requirements and analysis of the California Environmental Quality Act, in order to avoid duplication.

(5) A seven year capital improvement program, developed using the performance measures described in paragraph (2) to determine effective projects that maintain or improve the performance of the multimodal system for the movement of people and goods, to mitigate regional transportation impacts identified pursuant to paragraph (4). The program shall conform to transportation-related vehicle emissions air quality mitigation measures, and include any project that will increase the capacity of the multimodal system. It is the intent of the Legislature that, when roadway projects are identified in the program, consideration be given to maintaining bicycle access and safety at a level comparable to that which existed prior to the improvement or alteration. The capital improvement program may also include safety, maintenance, and rehabilitation projects that do not enhance the capacity of the system but are necessary to preserve the investment in existing facilities.

(c) The agency, in consultation with the regional agency, cities, and the county shall develop a uniform data base on traffic impacts for use in a countywide transportation computer model and shall approve transportation computer models of specific areas within the county that will be used by local jurisdictions to determine the quantitative impacts of development on the circulation system that are based on the countywide model and standardized modeling assumptions and conventions. The computer models shall be consistent with the modeling methodology adopted by the regional planning agency. The data bases used in the models shall be consistent with the data bases used by the regional planning agency. Where the regional agency has jurisdiction over two or more counties, the data bases used by the agency shall be consistent with the data bases used by the regional agency.

(d) (1) The city or county in which a commercial development will implement a parking cash-out program which is included in a congestion management program pursuant to subdivision (b), or a deficiency plan pursuant to Section 65089.4, shall grant to that development an appropriate reduction in parking requirements otherwise in effect for new commercial development.

(2) At the request of an existing commercial development that has implemented a parking cash-out program, the city or county shall grant an appropriate reduction in the parking requirements otherwise applicable based on the demonstrated reduced need for parking, and the space no longer needed for parking purposes may be used for other appropriate purposes.

(e) Pursuant to the federal Intermodal Surface Transportation Efficiency Act of 1991 and regulations adopted pursuant to the act, the department shall submit a request to the Federal Highway Administration Division Administrator to accept the congestion management program in lieu of development of a new congestion management system otherwise required by the act."

§ 65089.2 Program; evaluation by regional agency

(a) Congestion management programs shall be submitted to the regional agency. The regional agency shall evaluate the consistency between the program and the regional transportation plans required pursuant to Section 65080. In the case of a multicounty regional transportation planning agency, that agency shall evaluate the consistency and compatibility of the programs within the region.

(b) The regional agency, upon finding that the program is consistent, shall incorporate the program into the regional transportation improvement program as provided for in Section 65082. If the regional agency finds the program is inconsistent, it may exclude any project in the congestion management program from inclusion in the regional transportation improvement program.

(c) (1) The regional agency shall not program any surface transportation program funds and congestion mitigation and air quality funds pursuant to Section 182.6 and 192.7 of the Streets and Highways Code in a county unless a congestion management program has been adopted by December 31, 1992, as required pursuant to Section 65089. No surface transportation program funds or congestion mitigation and air quality funds shall be programmed for a project in a jurisdiction that has been found to be in nonconformance with a congestion management program pursuant to Section 65089.5 unless the agency finds that the project is of regional significance.

(2) Notwithstanding any other provision of law, upon the designation of an urbanized area, pursuant to the 1990 federal census or a subsequent federal census, within a county which previously did not

include an urbanized area, a congestion management program as required pursuant to Section 65089 shall be adopted within a period of 18 months after designation by the Governor.

(d) (1) It is the intent of the Legislature that the regional agency, when its boundaries include areas in more than one county, should resolve inconsistencies and mediate disputes which arise between agencies related to the congestion management programs adopted for those areas.

(2) It is the further intent of the Legislature that disputes which may arise between regional agencies, or agencies which are not within the boundaries of a multicounty regional transportation planning agency, should be mediated and resolved by the Secretary of the Business, Housing and Transportation Agency, or an employee of that agency designated by that secretary,
in consultation with the air pollution control district or air quality management district within whose boundaries the regional agency or agencies are located.

(e) At the request of the agency, a local jurisdiction that owns, or is responsible for operation of, a trip-generating facility in another county shall participate in the congestion management program of the county where the facility is located. If a dispute arises involving a local jurisdiction, the agency may request the regional agency to mediate the dispute through procedures pursuant to subdivision (d) of Section 65089.2. Failure to resolve the dispute does not invalidate the congestion management program.

§ 65089.3 Agency monitoring of program

The agency shall monitor the implementation of all elements of the congestion management program. The department is responsible for data collection and analysis on state highways, unless the agency designates that responsibility to another entity. The agency may also assign data collection and analysis responsibilities to other owners and operators of facilities or services if the responsibilities are specified in its adopted program. The agency shall consult with the department and other affected owners and operators in developing data collection and analysis procedures prior to program adoption. At least biennially, the agency shall determine if the county and cities are conforming to the congestion management program, including, but not limited to, all of the following:

(a) Consistency with levels of service standards, except as provided in Section 65089.4.

(b) Adoption and implementation of a program to analyze the impacts of land use decisions, including the estimate of the costs associated with mitigating these impacts.

(c) Adoption and implementation of a deficiency plan pursuant to Section 65089.4 when highway and roadway level of service standards are not maintained on portions of the designated system.

§ 65089.4 Deficiency plans

(a) A local jurisdiction shall prepare a deficiency plan when highway or roadway level of service standards are not maintained on segments or intersections of the designated system. The deficiency plan shall be adopted by the city or county at a noticed public hearing.

(b) The agency shall calculate the impacts subject to exclusion pursuant to subdivision (f) of this section, after consultation with the regional agency, the department, and the local air quality management district or air pollution control district. If the calculated traffic level of service following exclusion of these impacts is consistent with the level of service standard, the agency shall make a finding at a publicly noticed meeting that no deficiency plan is required and so notify the affected local jurisdiction.

(c) The agency shall be responsible for preparing and adopting procedures for local deficiency plan development and implementation responsibilities, consistent with the requirements of this section. The deficiency plan shall include all of the following:

(1) An analysis of the cause of the deficiency. This analysis shall include the following:

(A) Identification of the cause of the deficiency.

(B) Identification of the impacts of those local jurisdictions within the jurisdiction of the agency that contribute to the deficiency. These impacts shall be identified only if the calculated traffic level of service following exclusion of impacts pursuant to subdivision (f) indicates that the level of service standard has not been maintained, and shall be limited to impacts not subject to exclusion.

(2) A list of improvements necessary for the deficient segment or intersection to maintain the minimum level of service otherwise required and the estimated costs of the improvements.

(3) A list of improvements, programs, or actions, and estimates of costs, that will (A) measurably improve multimodal performance, using measures defined in paragraphs (1) and (2) of subdivision (b) of Section 65089, and (B) contribute to significant improvements in air quality, such as improved public transit service and facilities, improved nonmotorized transportation facilities, high occupancy vehicle facilities, parking cash-out programs, and transportation control measures. The air quality management district or air pollution control district shall establish and periodically revise a list of approved improvements, programs, and actions that meet the scope of this paragraph. If an improvement, program, or action on the approved list has not been fully implemented, it shall be deemed to contribute to significant improvements in air quality. If an improvement, program, or action is not on the approved list, it shall not be implemented unless approved by the local air quality management district or air pollution control district.

(4) An action plan, consistent with the provisions of Chapter 5 (commencing with Section 66000), that shall be implemented, consisting of improvements identified in paragraph (2), or improvements, programs, or actions identified in paragraph (3), that are found by the agency to be in the interest of the public health, safety and welfare. The action plan shall include a specific implementation schedule. The action plan shall include implementation strategies for those jurisdictions that have contributed to the cause of the deficiency in accordance with the agency's deficiency plan procedures. The action need not mitigate the impacts of any exclusions identified in subdivision (f). Action plan strategies shall identify the most effective implementation strategies for improving current and future system performance.

(d) A local jurisdiction shall forward its adopted deficiency plan to the agency within 12 months of the identification of the deficiency. The agency shall hold a noticed public hearing within 60 days of receiving the deficiency plan. Following that hearing, the agency shall either accept or reject the deficiency plan in its entirety, but the agency may not modify the deficiency plan. If the agency rejects the plan, it shall notify the local jurisdiction of the reasons for that rejection, and the local jurisdiction shall submit a revised plan within 90 days

addressing the agency's concerns. Failure of a local jurisdiction to comply with the schedule and requirements of this section shall be considered to be nonconformance for the purposes of Section 65089.5.

(e) The agency shall incorporate into its deficiency plan procedures a methodology for determining if deficiency impacts are caused by more than one local jurisdiction within the boundaries of the agency.

(1) If, according to the agency's methodology, it is determined that more than one local jurisdiction is responsible for causing a deficient segment or intersection, all responsible local jurisdictions shall participate in the development of a deficiency plan to be adopted by all participating local jurisdictions.

(2) The local jurisdiction in which the deficiency occurs shall have lead responsibility for developing the deficiency plan and for coordinating with other impacting local jurisdictions. If a local jurisdiction responsible for participating in a multi-jurisdictional deficiency plan does not adopt the deficiency plan in accordance with the schedule and requirements of paragraph (a) of this section, that jurisdiction shall be considered in nonconformance with the program for purposes of Section 65089.5.

(3) The agency shall establish a conflict resolution process for addressing conflicts or disputes between local jurisdictions in meeting the multi-jurisdictional deficiency plan responsibilities of this section.

(f) The analysis of the cause of the deficiency prepared pursuant to paragraph (1) of subdivision (c) shall exclude the following:

(1) Interregional travel.
(2) Construction, rehabilitation, or maintenance of facilities that impact the system.
(3) Freeway ramp metering.
(4) Traffic signal coordination by the state or other multijurisdictional agencies.
(5) Traffic generated by the provision of low and very low income housing.
(6) (A) Traffic generated by high density residential development located within one-fourth of a mile of a fixed rail passenger station.

(B) Traffic generated by any mixed use development located within one-fourth of a mile of a fixed rail passenger station, if more than half of the land area, or floor area, of the mixed use development is used for high density housing, as determined by the agency.

(g) For the purposes of this section, the following terms have the following meanings:

(1)"High density" means residential density development which contains a minimum of 24 dwelling units per acre and a minimum density per acre which is equal to or greater than 120 percent of the maximum residential density allowed under the local general plan and zoning ordinance. A project providing a minimum of 75 dwelling units per acre shall automatically be considered high density.

(2) "Mixed use development" means development which integrates compatible commercial or retail uses, or both, with residential uses, and which, due to the proximity of job locations, shopping opportunities, and residences, will discourage new trip generation."

§ 65089.5 Nonconformance to program; withholding funds

(a) If, pursuant to the annual monitoring provided for in Section 65089.3, the agency determines, following a noticed public hearing, that a city or county is not conforming with the requirements of the congestion management program, the agency shall notify the city or county in writing of the specific areas of nonconformance. If, within 90 days of the receipt of the written notice of nonconformance, the city or county

has not come into conformance with the congestion management program, the governing body of the agency shall make a finding of nonconformance and shall submit the finding to the commission and to the Controller.

(b) (1) Upon receiving notice from the agency of nonconformance, the Controller shall withhold apportionments of funds required to be apportioned to that nonconforming city or county by Section 2105 of the Street and Highways Code.

(2) If, within the 12-month period following the receipt of a notice of nonconformance, the Controller is notified by the agency that the city or county is in conformance, the Controller shall allocate the apportionments withheld pursuant to this section to the city or county.

(3) If the Controller is not notified by the agency that the city or county is in conformance pursuant to paragraph (2), the Controller shall allocate the apportionments withheld pursuant to this section to the agency.

(c) The agency shall use funds apportioned under this section for projects of regional significance which are included in the capital improvement program required by paragraph (5) of subdivision (b) of Section 65089, or in a deficiency plan which has been adopted by the agency. The agency shall not use these funds for administration or planning purposes.

§ 65089.6 Failure to complete or implement a program

Failure to complete or implement a congestion management program shall not give rise to a cause of action against a city or county for failing to conform with its general plan, unless the city or county incorporates the congestion management program into the transportation element of its general plan.

§ 65089.7 Application of chapter to agreements entered into prior to July 10, 1989

A proposed development specified in a development agreement entered into prior to July 10, 1989, shall not be subject to any action taken to comply with this chapter, except actions required to be taken with respect to the trip reduction and travel demand element of a congestion management program pursuant to paragraph (3) of subdivision (b) of Section 65089.

APPENDIX C

GUIDELINES FOR CMP TRAFFIC IMPACT ANALYSIS REPORTS IN SAN BERNARDINO COUNTY

APPENDIX C
GUIDELINES FOR CMP TRAFFIC IMPACT ANALYSIS REPORTS
IN SAN BERNARDINO COUNTY

These guidelines describe the key elements required for preparing Traffic Impact Analysis Reports (TIA Reports) for the Congestion Management Program (CMP) in San Bernardino County. The purpose of these guidelines is to achieve a common approach to preparation of TIA Reports by all jurisdictions, thereby reducing inconsistencies and disagreements on how such studies should be performed.

TIA Reports shall be prepared by local jurisdictions when local criteria and thresholds indicate they are necessary. However, TIA Reports must be prepared to satisfy CMP requirements when a proposed change in land use, development project, or at local discretion, a group of projects are forecast to equal or exceed the CMP threshold of 250 two-way peak hour trips (1,000 for retail land uses or a weighted average, for mixed uses) generated, based on trip generation rates published for the applicable use or uses in the Institute of Transportation Engineers' Trip Generation or other CMA-approved data source. Pass-by trips shall not be considered in the threshold determination. However, industrial, warehousing and truck projects shall convert trucks to PCE's before applying the threshold.

Projects shall not be split to avoid the CMP requirements. If an additional phase of a project, when added to the preceding phases, causes the sum of the phases to exceed the threshold, the entire project must be analyzed as a unit. The analysis must be conducted when the phases are anticipated and should not wait for later phases, even if earlier phases alone would not exceed the threshold.
Locally determined criteria may be developed which are more stringent than those identified above. Individual development projects, parcels, or proposals in the same geographic vicinity that can reasonably be combined into a single project for analysis purposes which meets the threshold requirements for a TIA Report shall be analyzed as a single project.

TIA REVIEW

All TIA Reports shall be copied to the CMA. If a TIA Report is prepared by the local jurisdiction as stated above, and if the TIA Report determines that the project would add 80 or more 2-way peak-hour trips to a CMP arterial within another jurisdiction or 100 2-way peak-hour trips to a freeway, that jurisdiction (and Caltrans, if a state highway) shall be provided a copy of the TIA Report by the permitting jurisdiction. However, these criteria are not intended to determine when a local jurisdiction prepares a TIA Report.

It is the responsibility of the local jurisdiction to provide review copies of the TIA Report to the CMA and to potentially impacted jurisdictions so that review will occur in concert with the permitting jurisdiction's project review schedule, and prior to any approval or permitting activity. (Note: the transmittal letter shall indicate the agencies receiving the TIA report.) The period allotted for review shall be stipulated by the permitting jurisdiction but shall not be less than 15 working days from the date the CMA receives the report. To establish the date of receipt, it is encouraged the report be transmitted by certified mail. Should serious technical flaws be identified in the TIA Report such that the permitting

jurisdiction chooses to recirculate the TIA Report, the recirculated document shall be reviewed no later than 10 working days from the date of receipt.

The reports focus on the potential impacts of land use decisions on the CMP system. These reports are used in conjunction with modeling for the CMP system to forecast transportation deficiencies in San Bernardino County. While there are unique aspects to many projects, the approach outlined here can be applied to the vast majority of projects. The preparer of the report is responsible for presenting all the relevant information that would be helpful in making transportation-related decisions. The guidelines presented here should be regarded as typical minimum requirements. They are not a substitute for exercising good planning and engineering judgment. Local agencies may wish to include additional requirements for traffic analysis beyond those for the CMP. Only the CMP requirements are addressed here; any requirements added by a jurisdiction apply only in that jurisdiction, unless otherwise agreed.

Other information relating to the preparation of a TIA Report may be found in Chapter 4 of the Congestion Management Program for San Bernardino County. Preparers of TIA Reports should consult the CMP for additional detail.

Implications of CMP Review

The authority to make land use decisions rests with local jurisdictions. A Land Use/Transportation Analysis Program consistent with the CMP guidelines has the potential to influence local land use decisions by requiring full evaluation and disclosure of impacts to the regional transportation system, regardless of jurisdictional boundaries. Local jurisdictions are required to maintain the adopted standards on the CMP system, so it is essential that local jurisdictions consider the necessary actions and costs required to mitigate impacts that result from local land use decisions.

The success of the program relies on consistency with applicable regional plans, and the cooperative efforts of local jurisdictions, Caltrans, and the CMA. If an integration of land use decisions and the provision of transportation facilities is not accomplished as required by the program, a jurisdiction which fails to mitigate deficiencies on the CMP system caused by its land use decisions will face withholding of its Proposition 111 gas tax increment funds.

Content of the Traffic Impact Analysis Report (TIA)

The TIA Report may be contained within other similar documents (e.g. an EIR prepared under CEQA), or it may be an independent document. The intent is to address all CMP concerns without duplication of other work. In some jurisdictions, the TIA Report may be prepared by the developer or developer's consultant. In other jurisdictions, the TIA Report may be prepared by the jurisdiction or jurisdiction's consultant. In either case, it is in the interest of all parties that the participants fully understand and come to agreement on the assumptions and methodology prior to conducting the actual analysis. This is particularly important when considering using assumptions that vary from the norm. The local jurisdiction may request a meeting with the developer and/or preparer of the TIA Report to discuss the methodology prior to the initiation of work on the analysis. A meeting with the CMA is also encouraged to address issues associated with large or extraordinary projects.

The following outline and commentary represents the recommended structure for the TIA Report.

I. Introduction.

Should set the stage for the analysis, providing background information necessary for the unfamiliar reader to understand the magnitude of the project, location of the project, and special characteristics.

A. Project, general plan or specific plan description.

If this is already included in another part of a more comprehensive document, that is acceptable. The description must include project size by land use type, location of project, approximate location of proposed access points to the local and regional roadway system, and movements from adjacent streets allowed into and out of the project. This should be shown in a site diagram. Special characteristics of the site, such as unusual daily or seasonal peaking characteristics or heavy involvement of truck traffic, should be mentioned.

B. Analysis methodology.

Provide a general description (overview) of the process used to analyze the project. Analysis years should be specified and the approach to the modeling/traffic forecasting process should be explained. The sources of information should be identified. The study area and method for level of service analysis for the various roadway types should be identified. At a minimum, the study area must include all freeway links with 100 or more peak-hour project trips (two-way) and other CMP roadways with 80 or more peak-hour project trips (two-way). The study area does not end with a city or county boundary. The study area is defined by the magnitude of project trips alone. In most cases, the analysis need not extend more than five miles beyond the project site, even if there are more than 80 project trips on an arterial and 100 project trips on a freeway. However, analysis of projects in isolated areas with few access routes should be continued until the 100 or 80-trip threshold is met. Within the defined study area, all "key intersections," as listed in the most current CMP, must be analyzed.

Key intersections represent intersections of CMP roadways plus those additional intersections recognized by local jurisdictions and/or SANBAG to be important to mobility on CMP roadways may be considered key intersections. At a minimum, key intersections will include signalized intersections operating at LOS D or below. The distribution of traffic must be shown for all roadways on which project trips occur (except those for internal circulation), whether or not they are on the CMP network.

The analysis of traffic operations and level of service is to be provided for the following conditions and is to include an assessment of traffic mitigation requirements for project opening day and future conditions.

1. Existing conditions - conditions, at the time of TIA preparation, without the inclusion of the project generated trips. Existing deficiencies should be identified, but mitigation analysis is not required. The existing conditions analysis must include the full project impact area as defined above.

2. Project full generation conditions - the conditions on the opening day of the project, first excluding the project traffic, and then including the project traffic assuming the full trip generation impact of the site. If it is deemed more appropriate because of the nature of the project, another intermediate scenario may be included to focus on the access requirements and/or immediate area surrounding the project, subject to a request by the local jurisdiction.

3. Future conditions - the conditions for two model forecast year scenarios: 1) excluding the project traffic, and 2) including the project traffic. Full mitigation analysis is to

be performed for future conditions. In addition, a staging analysis of mitigations may be required for large projects constructed over a long time period. The need for a staging analysis will be determined by the local jurisdiction.

The analysis of the project full generation and future condition shall be based on, at a minimum, the PM peak-hour of the adjacent street traffic. An analysis of the AM peak-hour of the adjacent street traffic is also required for developments containing residential land uses, and may be required for other types of development at local discretion. Analysis may be required for peak-hours other than the AM and PM peak for some land uses. This determination will be made by the local jurisdiction. The peak traffic generation hour of the development, if different from peak AM and PM hours, must also be identified, and the total vehicle trips during the peak-hour of the generator must be estimated. This will facilitate a decision regarding the need to evaluate time periods other than the peak-hours of the adjacent streets.

II. Existing conditions.

A. Existing roadway system.

Provide a map and brief written description of the roadway network. The number and type of lanes on freeways, principal arterials, and other impacted roadways should be identified. Signalized intersections and plans for signalization should be identified. The existing number of lanes at key CMP intersections should be clearly identified on a graphic or in conjunction with the level of service analysis output. Maps of the CMP network are available in the Congestion Management Program documentation, available from the CMA. Also describe the relevant portions of the future network as specified with officially approved funding sources.

B. Existing volumes.

Existing average weekday daily traffic (AWDT) should be identified for the CMP links in the study area. Historic volume growth trends in the study area should be shown. Consult the local jurisdiction, Caltrans, and San Bernardino County for additional information.

C. Existing levels of service.

A level of service analysis must be conducted on all existing segments and intersections on the CMP network potentially impacted by the project or plan (as defined by the thresholds in Section I. B). Urban segments (i.e., segments on roadways that are generally signalized with spacing less than 2 miles) do not require segment analysis. Segment requirements can normally be determined by the analysis of lane requirements at intersections. Freeway mainline must be analyzed, and ramp/weaving analysis may be required at local discretion, if a ramp or weaving problem is anticipated. Chapter 2 of the CMP presents the acceptable LOS methodologies, based on the 2000 Highway Capacity Manual. Several software packages are available for conducting LOS analysis for signalized intersections, freeways, and other types of roadways. The software package and version used must be identified. Normally, the existing LOS analysis for intersections will be run using optimized signal timing, since the future analysis will normally need to be run using optimized timing. Signal timing optimization should consider pedestrian safety and signal coordination requirements.

Minimum times should be no less than 10 seconds.

Saturation flow rates are considered as average field measured saturation flow rates, and in no case shall the adjusted saturation flow rates of the 2001 Highway Capacity Software be allowed to go lower than the specified saturation flow rates listed on page C-13, when field data are not available. However, there shall be no restriction on minimum saturation flow rates if actual saturation flow rates are available.

Default lost time is two seconds per phase, and a clearance signal time of three seconds. Without local data to show otherwise, a peak-hour factor of 0.95 may be assumed for existing and full generation scenarios. Variations from these values must be documented and justified. LOS analyses should be field-verified so that the results are reasonably consistent with observation and errors in the analysis are more likely to be caught. A brief commentary on existing problem areas must be included in this section, bringing existing problems to the attention of the readers.

Only future scenarios with project require that traffic operational problems be mitigated to provide LOS E or better operation. If the lead agency or an affected adjacent jurisdiction requires mitigation to a higher LOS, this takes precedence over the CMP requirements.

D. Related general plan issues.

The relationship to the general plan may be identified. This section should provide general background information from the Traffic Circulation Element of the General Plan, including plans for the ultimate number of lanes, new roadways planned for the future, and other information that provides a context for how the proposed project interrelates with the future planned transportation system.

III. Future conditions.

A. Traffic forecasts.

One of the primary products of the TIA is the comparison of future traffic conditions with and without the project. The primary forecasts will be for the CMP forecast year (consult the CMA for the most currently applicable forecast years. If a project is phased over a development period past the CMP forecast year, a buildout forecast with forecast background traffic must also be provided. There are two components of the forecast that need to be considered: background traffic and project traffic. Acceptable methodologies for these forecasts are described below:

Project Traffic Forecasts.

Two basic alternatives are available for forecasting project traffic:

1. Manual method - Generate project trips using rates from the ITE Trip Generation report. Distribute and assign the trips based on the location of the project relative to the remainder of the urban area and on the type of land use. Rather than relying on pure judgment to develop the distribution of project traffic, the future year CMP model select zone needs to be obtained from SCAG to determine the distribution pattern. The percentage distribution should be reasonably related to the location of and the number of trips generated by zones surrounding the project. Computer-assisted trip distribution and assignment methods may be used as long as they reasonably represent the travel

characteristics of the area in which the project is located. It should be noted that the model does not forecast trucks of three axles or more. Therefore distribution needs to be made in a reasonable manner.

2. Use of local model - Create a zone or zones that represent the project (if not already contained in the local model). The CMP model may be used if new zones are created to represent the project (it is unlikely that the CMP model will already have zones small enough to represent the project). The zone or zones should include the exact representation of driveway locations with centroid connectors. It is important that the driveway representations be exact to produce acceptable turning movement volumes. Some adjustments to the turning movement volumes may be needed, depending on the adequacy of this representation. (See page C-14, Item 5).)

The above methodologies may produce different results, both in the generation of trips and the distribution of trips. However, both methods will have application, depending on the jurisdiction and on the type and size of project. It should be noted that a model select zone run shall be used for distribution and ITE trip generation rates for project trips.

Background Traffic Forecasts.

Background traffic refers to all traffic other than the traffic associated with the project itself. The background traffic shall include truck volumes (converted to PCE's) on arterial streets, interchange ramps and mainline freeway lanes. A minimum of one 2-way classification count shall be provided per arterial. The count location shall be acceptable to the local agency. Future scenarios may use the truck model or 150 percent of the existing truck volume for arterials and freeway ramps and 160 percent for mainline freeway lanes.

Several alternatives for forecasting background traffic are:

1. For project full generation analysis - Use accepted growth rates provided by the jurisdictions in which the analysis is to take place. Each jurisdiction's growth rates should be used for intersections and segments within that jurisdiction. A table of growth rates may be available from the jurisdictions.

2. For horizon year - The traffic model will provide the needed forecasts and if requested, background plus project forecasts. Local models may also be used to generate intersection and segment forecasts, <u>if a traffic refinement process is properly applied to maximize the quality and reasonableness of the forecasts</u>. Alternatively, the CMP model may be used to generate growth factors by subarea, which may be applied to existing intersection and segment volumes. Ideally, cities and/or the County should establish the background forecasts annually for use by project applicants. Project applicants may obtain the background forecasts from the city/county without having to produce new forecasts. This approach is intended to minimize conflict and debate over the forecasts provided, as would occur if each applicant developed a completely new set of background forecasts. Until the city/county is in a position to produce these forecasts on a routine basis, they may wish to use the results of the background forecasts from prior acceptable TIA Reports as the basis for background forecasts for other TIA Reports. The

separate forecasting of background traffic by each TIA Report preparer is redundant, will only create conflict among reports, and should be avoided by the city/county providing an acceptable background forecast for use by all TIA Report preparers. The availability of such forecasts should be established before initiating the preparation of a TIA Report. If the CMP model is being used as the basis for the forecast, assume that the project is not included in the CMP model forecast (unless it can be definitively proven otherwise). If a local model is being used, the background traffic will be derived by subtracting the project traffic from the forecast where the project is already represented in the model. Where the project is not represented in the model, the background traffic can be directly derived from the model (with appropriate refinement to maintain quality and reasonableness of the forecasts).

A Note on Methodology for General Plans and Specific Plans:

In the case of analysis of general plan revisions/updates or specific plans, the same approach is applied as above. However, the "project" to be analyzed shall consist of the proposed land use. However, for threshold determination use the difference between the previously approved general plan and the proposed revision to the general plan. Unless otherwise agreed by the local jurisdiction, the analysis must assume the maximum intensity of land uses allowed (i.e., worst case) on the parcels to which the revision applies. All new specific plans must be analyzed based on worst case assumptions. Although general plans may not identify specific access locations, the analysis must assume access locations that are reasonable, based on the location and size of the plan.

B. Traffic added by project, general plan revision/update, or specific plan.

The methods for generating and distributing project trips must be consistent with the appropriate methodology listed above. The total number of trips generated by the project must be specified by land use. The source of the trip generation rates must be documented. Any assumed reductions in trip generation rates, such as internal trips, and transit/TDM reductions must be documented. Pass-by trips may be allowed only for retail uses and fast-food restaurants. The pass-by and internal trip percentages and methodology must be consistent with the estimates and methodology contained in the latest ITE Trip Generation handbook. The internal trip percentage must be justified by having a mixed-use development of sufficient size. In special cases, larger reductions may be allowed; but these must be documented and justified. Reductions for transit or TDM must be accompanied by an explanation of how the strategies will actually be implemented and may require a monitoring program. Project trips (inbound and outbound) must be identified on a graphic map for both the peak hour or hours being studied. Industrial and warehouse truck uses must also show the estimated number and distribution of truck trips (MPCE's) for the same hours. The basis for the generation and distribution of trips must be identified. The City of Fontana Study of Truck Generation Rates is acceptable (see ITE Journal - July 1994), except for common carriers such as Yellow Freight, Roadway or Swift. The trip generation rate

for a warehouse or industrial project involving these carriers shall be determined by the "ITE Generation" latest edition report or a site specific study approved by the local jurisdiction.

C. Transit and TDM considerations.

Transit and travel demand management strategies are a consideration in many development projects. Requirements within each jurisdiction are contained in the local TDM ordinance, to be adopted by each local jurisdiction as part of the CMP requirements. Examples of items to include are location of transit stops in relationship to the proposed project, designation of ridesharing coordinator, posting of information on transit routes and ridesharing information, provision of transit passes, etc..

D. Traffic model forecasts.

Provide a map showing link volumes by direction. All CMP arterial links with 80 or more peak-hour project trips (two-way) and freeway links with 100 or more peak-hour project trips (two-way) must be shown. The factor to derive a peak-hour from the three-hour AM peak period is .38. The factor to derive a peak-hour from the four-hour PM peak is 28. All model forecasts shall be post processed in order to be used.

E. Future levels of service.

Compute levels of service for CMP segments and intersections based on the procedures in the 2000 Highway Capacity Manual and subsequent updates. Refer to the procedures adopted in Chapter 2 of the CMP and the assumptions specified in section II.C of this appendix. Copies of the volumes, intersection geometry, capacity analysis worksheets, and all relevant assumptions must be included as appendices to the TIA Report. It should be noted that the v/c ratio and implied level of service that can be output by travel demand models are different from the level of service analysis prescribed in this section. The capacities used in the model are not typically the same capacities as used in the capacity analysis.

Left turn, through and right turn lane queuing analysis is highly desirable to validate an intersection's LOS. This more detailed analysis is meant to ensure the various movements do not overflow and impede adjacent movements, and is left to the discretion of the local agency.

F. Description of projected level of service problems.

Identify resulting levels of service for intersections and segments, as appropriate, on a map for applicable peak-hours. Describe in the text the nature of expected level of service problems. Describe any other impacts that the project may also have on the CMP roadway network, particularly access requirements.

G. Project contribution to total new volumes (forecast minus existing) on analyzed links.

Compute the ratio of traffic generated by the proposed development to the total new traffic (including project traffic) generated between the existing condition and forecast year for each analyzed link or intersection. The purpose of this calculation is to identify the proportion of volume increase that can be attributed to the proposed project. This

will be a necessary component of any deficiency plans prepared under the CMP at a later date. The calculations are to be conducted for all applicable peak-hours. The results may be shown on a map or in a table by percentages to the nearest tenth of a percent.

IV. Project mitigation.

The mitigation of project impacts is designed to identify potential level of service problems and to address them before they actually occur. This will also provide a framework for negotiations between the local jurisdiction and the project developer. The CMA will not be involved in these negotiations unless requested by a local jurisdiction. Impacts beyond the boundaries of the jurisdiction must be identified in the same fashion as impacts within the jurisdictional boundary. Impacted local agencies outside the boundary will be provided an opportunity for review of the TIA Report. Negotiations with these outside jurisdictions and with Caltrans is a possible outcome, depending on the magnitude and nature of the impacts. For the CMP, the mitigations must bring the roadway into conformance with the LOS standards established for the CMP. However, local agencies may require conformance to higher standards, and these must be considered in consultation with the local jurisdiction. Measures to address local needs that are independent from the CMP network should be included in the TIA Report for continuity purposes. Consult the local jurisdiction to determine requirements which may be beyond the requirements of the CMP. The information required in this part of the TIA Report is described below.

A. Other transportation improvements already programmed and fully funded (should be assumed in forecast).

B. Roadway improvements needed to maintain CMP level of service standard.

These should include an evaluation of intersection turn lanes, signalization, signal coordination, and link lane additions, at a minimum. If a freeway is involved, lane requirements and ramp treatments to solve level of service deficiencies must be examined. Prior studies on the same sections may be furnished to the preparer of the TIA, and such studies may be referenced if they do, in fact, provide the necessary mitigation for the proposed project. However, the calculation of percentage of contribution of the project to the growth in traffic must still be provided for the appropriate peak-hours, as described earlier. If the physical or environmental constraints make mitigation unlikely, then the contribution may be used to improve level of service elsewhere on the system or another location that would relieve the impact. The point of referencing a previously conducted study is to avoid unnecessary duplication of effort on the same sections of roadway. Copies of previously conducted relevant studies in the area may be obtained from the local jurisdictions or the CMA, including any plans resulting from the annual modeling runs for the CMP.

C. Other improvements needed to maintain the LOS standard.

In some cases, additional transit and TDM strategies beyond what was in the original assumptions may be necessary to provide

an adequate mitigation. These must be described and the method for implementation must be discussed.

D. Level of service with improvements.

The level of service with improvements must be computed and shown on a map or table along with the traffic level of service without improvements. Delay values, freeway volume/capacity ratios, or other measures of level of service must be included in the results (could be in an appendix) along with the letter designation.

E. Cost estimates.

The costs of mitigating deficiencies must be estimated for deficiencies that occur either within or outside the boundaries of the jurisdiction. The costs must be identified separately for each jurisdiction and for Caltrans roadways. Prior studies and cost estimates by SANBAG, Caltrans and other jurisdictions may be referenced. Used together with the analysis conducted in Section III.G, this will provide an approximation of project contribution to the needed improvements. This estimate is prepared for discussion purposes with the local jurisdiction and with neighboring jurisdictions and Caltrans. It does not imply any legal responsibility or formula for contributions to mitigations. If a mitigation is identified as necessary to bring a deficiency into conformance with the level of service standard, but physical or environmental constraints make the improvement impractical, an equivalent contribution should be considered to improve the LOS elsewhere on the system or another location providing direct relief.

F. Relationship to other elements.

While the measures required to address air quality problems are not required for the TIA Report, they may be required as part of a CEQA review. The TIA Report may be integrated with environmental documents prepared for CEQA requirements. This is at the discretion of the local jurisdiction.

V. Conclusions and recommendations.

A. Summary of proposed mitigations and costs.

Provide a summary of the impacts, proposed mitigations, and the costs of the mitigations. A cost estimate for the proposed mitigations must be included. Generalized unit costs will be available from either Caltrans, the local jurisdiction, or the CMA. The source of the unit cost estimates used must be specified in the TIA Report.

B. Other recommendations.

List any other recommendations that should be brought to the attention of the local jurisdiction, the CMA, or Caltrans. This may include anticipated problems beyond the forecast year or on portions of the network not analyzed.

Summary List of Typical Figures and Tables to Be Included in a TIA Report:

- Project location and 5 mile limit study area (map)
- Project size by land use (table)
- Trips generated by land use for AM and PM weekday peak-hours of adjacent street traffic and for daily traffic inbound and

outbound (table) and other applicable peak-hours

- List of other planned transportation improvements affecting the project
- Existing intersection and link volumes and levels of service (map)
- Distribution and assignment of project trips (map)
- Forecast traffic without project and with project for applicable peak-hours (map or table)
- Levels of service without project and with project (map or table)
- Improvements required to mitigate project various scenario impacts (map and/or table)
- Ratio of project traffic to new traffic (new traffic means the difference between existing and forecast) on analyzed links or intersections (map or table)
- Improvement costs by jurisdiction and for Caltrans roadways

SUMMARY OF ANALYSIS ASSUMPTIONS FOR THE CMP TRAFFIC IMPACT ANALYSIS GUIDELINES

Level of Service Analysis Procedures and Assumptions

Intersections

Methodology- 2000 HCM operational analysis.

Assumptions- Optimized signal timing/phasing for future signal analysis, unless assumed to be in a coordinated system, in which case estimated actual cycle length is used. The maximum cycle length for a single signalized intersection or system should be 130 seconds.

- 10 second minimum phase time, including change interval.
- Average arrivals, unless a coordinated signal system dictates otherwise.
- Ideal lane width (12 feet).
- 2 second lost time/phase.
- "Required" solution if analysis by Webster.
- Exclusive right turn lane is assumed to exist if pavement is wide enough to permit a separate right turn, even if it is not striped. (Minimum 20' from curb line to lane stripe.)
- A full saturation flow rate can be assumed for an extra lane provided on the upstream of the intersection only if this lane also extends at least 600 ft downstream of the intersection (or to the next downstream intersection).
- PHF = 0.95 for future analysis.
- The lane utilization factor may also be set at 1.00 when the v/c ratio for the lane group approaches 1.0, as lanes tend to be more equally utilized in such situations.

- Industrial, warehousing and other Projects with high truck percentages should convert to PCE's before applying thresholds.

Saturation Flows

Case (i) When field saturation flow rates and any special intersection characteristics are not available, the following field adjusted saturation flow rates are recommended for analysis.

Existing and Opening Year Scenarios

- Exclusive thru: 1800 vphgpl
- Exclusive left: 1700 vphgpl
- Exclusive right: 1800 vphgpl
- Exclusive double left: 1600 vphgpl
- Exclusive triple left: 1500 vphgpl or less

Future Scenarios

- Exclusive thru: 1900 vphgpl
- Exclusive left: 1800 vphgpl
- Exclusive double left: 1700 vphgpl
- Exclusive right: 1900 vphgpl
- Exclusive double right: 1800 vphgpl

Exclusive triple left: 1600 vphgpl

Note: Existing field saturation flow rates should be used if they are available and any special traffic or geometric characteristics should also be taken into account if known to affect traffic flow.

Freeways

- Capacity of 2,300 vehicles/hour/lane (1600/hr/lane/HOV)
- Use Caltrans truck percentages (includes trucks, buses and RV's)
- Peak-hour factor of .98 for congested areas and .95 for less congested areas
- Directional distribution of 55% and 45%, if using non-directional volumes from Caltrans volume book
- Design speed of 70 mph
- Volumes used from Caltrans' annual volume book are assumed to be PM peak-hour. AM peak mainline volumes assumed as 90% of PM peak, if using Caltrans volume book

Stop Controlled Intersections

- 2000 HCM for 2-way and 4-way stops

Project-Related Assumptions

1) Use the latest ITE Trip Generation handbook for mixed use internal trip percentages. Higher percentages must be fully justified.

2) Pass by trips - Retail uses and fast food restaurants only

   - Use ITE procedures to estimate percentage

   - For analysis at entry points into site, driveway volume is not reduced (i.e., trip generation rate is still the same). Rather, trips are redistributed based on the assumed prevalent directions of pass-by trips (see recommended ITE procedure).

3) Reductions for transit or TDM are a maximum of 10% unless higher can be justified.

4) Intersections will be considered deficient (LOS "F") if the critical v/c ratio equals or exceeds 1.0, even if the level of service defined by the delay value is above the defined LOS standard.

5) All the computer-generated traffic forecasts need to be refined (post processed by using "B" turns software available through SCAG's Riverside Office or another approved methodolgy as found in the Federal Transportation Research Board Report 255. However, the post processing of turning movements is restricted to local models only.) for use in TIA Reports to provide the best estimate of future volumes possible.

6) The study threshold for a stand-alone movie theater is 250 2-way peak hour trips.

Other

1) If a new traffic generating development project (other than a single family residential unit) within a federally designated urbanized area abuts a state highway or abuts a highway that intersects a State highway within 500 feet of that intersection, the local jurisdiction in which the development occurs must notify Caltrans and the CMA.

2) The TIA procedures will be reviewed biannually. Forward comments to the CMA.

3) Industrial warehouse and truck projects may distribute only truck trips by hand. (Employee trip distribution shall be modeled.)

APPENDIX D

GUIDELINES FOR THE PREPARATION OF DEFICIENCY PLANS

APPENDIX D
GUIDELINES FOR THE PREPARATION OF DEFICIENCY PLANS

Chapter 8 of the CMP provides the background behind the preparation of deficiency plans.

If the traffic level of service at an intersection or on a segment drops below the adopted level of service standard (LOS E), **or if the current LOS is F and the quantitative measure of LOS increases by 10 percent or more,** local jurisdictions are required to prepare, adopt, and implement a deficiency to maintain conformance with the CMP and avoid loss of the increment of the local gas tax subvention added by Proposition 111 in 1990. A deficiency plan is the mechanism provided by the CMP to correct a deficiency by either implementing improvements or strategies that elevate the level of service to a condition equal to or better than the prescribed level of service standard, or implementing improvements or strategies that result in a measurable improvement in system performance, and contribute to significant improvements in air quality.

LEGAL REQUIREMENTS

California Government Code Section 65089.4 sates the following requirements for CMP deficiency plans:

> (a) A local jurisdiction shall prepare a deficiency plan when highway or roadway level of service standards are not maintained on segments or intersections of the designated system. The deficiency plan shall be adopted by the city or county at a noticed public hearing.
>
> (b) The agency shall calculate the impacts subject to exclusion pursuant to subdivision (f) of this section, after consultation with the regional agency, the department, and the local air quality management district or air pollution control district. If the calculated traffic level of service following exclusion of these impacts is consistent with the level of service standard, the agency shall make a finding at a publicly noticed meeting that no deficiency plan is required and so notify the affected local jurisdiction.
>
> (c) The agency shall be responsible for preparing and adopting procedures for local deficiency plan development and implementation responsibilities, consistent with the requirements of this section. The deficiency plan shall include all of the following:
>
> (1) An analysis of the cause of the deficiency. This analysis shall include the following:
>
> (A) Identification of the cause of the deficiency.
>
> (B) Identification of the impacts of those local jurisdictions within the jurisdiction of the agency that contribute to the deficiency. These impacts shall be identified only if the calculated traffic level of service following exclusion of impacts pursuant to subdivision (f) indicates that the level of service standard has not been maintained, and shall be limited to impacts not subject to exclusion.
>
> (2) A list of improvements necessary for the deficient segment or intersection to maintain the minimum level of service

otherwise required and the estimated costs of the improvements.

(3) A list of improvements, programs, or actions, and estimates of costs, that will (A) measurably improve multimodal performance, using measures defined in paragraphs (1) and (2) of subdivision (b) of Section 65089, and (B) contribute to significant improvements in air quality, such as improved public transit service and facilities, improved nonmotorized transportation facilities, high occupancy vehicle facilities, parking cash-out programs, and transportation control measures. The air quality management district or air pollution control district shall establish and periodically revise a list of approved improvements, programs, and actions that meet the scope of this paragraph. If an improvement, program, or action on the approved list has not been fully implemented, it shall be deemed to contribute to significant improvements in air quality. If an improvement, program, or action is not on the approved list, it shall not be implemented unless approved by the local air quality management district or air pollution control district.

(4) An action plan, consistent with the provisions of Chapter 5 (commencing with Section 66000), that shall be implemented, consisting of improvements identified in paragraph (2), or improvements, programs, or actions identified in paragraph (3), that are found by the agency to be in the interest of the public health, safety and welfare. The action plan shall include a specific implementation schedule. The action plan shall include implementation strategies for those jurisdictions that have contributed to the cause of the deficiency in accordance with the agency's deficiency plan procedures. The action need not mitigate the impacts of any exclusions identified in subdivision (f). Action plan strategies shall identify the most effective implementation strategies for improving current and future system performance.

(d) A local jurisdiction shall forward its adopted deficiency plan to the agency within 12 months of the identification of the deficiency. The agency shall hold a noticed public hearing within 60 days of receiving the deficiency plan. Following that hearing, the agency shall either accept or reject the deficiency plan in its entirety, but the agency may not modify the deficiency plan. If the agency rejects the plan, it shall notify the local jurisdiction of the reasons for that rejection, and the local jurisdiction shall submit a revised plan within 90 days addressing the agency's concerns. Failure of a local jurisdiction to comply with the schedule and requirements of this section shall be considered to be nonconformance for the purposes of Section 65089.5.

(e) The agency shall incorporate into its deficiency plan procedures a methodology for determining if deficiency impacts are caused by more than one local jurisdiction within the boundaries of the agency.

(1) If, according to the agency's methodology, it is determined that more than one local jurisdiction is responsible for causing a deficient segment or intersection, all responsible local jurisdictions shall participate in the development of a deficiency plan to be adopted by all participating local jurisdictions.

(2) The local jurisdiction in which the deficiency occurs shall have lead responsibility for developing the deficiency plan and for coordinating with other impacting local jurisdictions. If a local jurisdiction responsible for participating in a multi-jurisdictional deficiency plan does not

adopt the deficiency plan in accordance with the schedule and requirements of paragraph (a) of this section, that jurisdiction shall be considered in nonconformance with the program for purposes of Section 65089.5.

(3) The agency shall establish a conflict resolution process for addressing conflicts or disputes between local jurisdictions in meeting the multi-jurisdictional deficiency plan responsibilities of this section.

(f) The analysis of the cause of the deficiency prepared pursuant to paragraph (1) of subdivision (c) shall exclude the following:

(1) Interregional travel.

(2) Construction, rehabilitation, or maintenance of facilities that impact the system.

(3) Freeway ramp metering.

(4) Traffic signal coordination by the State or other multijurisdictional agencies.

(5) Traffic generated by the provision of low and very low income housing.

(6) (A) Traffic generated by high density residential development located within one-fourth of a mile of a fixed rail passenger station.

(B) Traffic generated by any mixed use development located within one-fourth of a mile of a fixed rail passenger station, if more than half of the land area, or floor area, of the mixed use development is used for high density housing, as determined by the agency.

(g) For the purposes of this section, the following terms have the following meanings:

(1) "High density" means residential density development which contains a minimum of 24 dwelling units per acre and a minimum density per acre which is equal to or greater than 120 percent of the maximum residential density allowed under the local general plan and zoning ordinance. A project providing a minimum of 75 dwelling units per acre shall automatically be considered high density.

(2) "Mixed use development" means development which integrates compatible commercial or retail uses, or both, with residential uses, and which, due to the proximity of job locations, shopping opportunities, and residences, will discourage new trip generation."

POLICY GUIDANCE

In addition to statute, the CMP for San Bernardino County is guided by the following policies enacted by the CMA Board of Directors:

- Address existing and future deficiencies on all CMP facilities through Deficiency plans which cover large geographic areas of the county (such as the Valley or Victor Valley), rather than individual facilities or individual corridors. (CMP Policy 8.1.1)

- Use the countywide Comprehensive Transportation Plan (CTP) to analyze causes of deficiencies and define the local jurisdiction actions to be implemented through areawide Deficiency plans. (CMP Policy 8.1.4)

- If additional consultant assistance is needed to prepare the areawide deficiency plans following completion of the CTP, it should be funded by local transportation sales tax (Valley only) and/or State or federal transportation planning funds...Updates of the deficiency plans, as needed, should be

conducted in conjunction with biennial updates of the CMP and CTP.

BACKGROUND

Under the California Government Code, local jurisdictions are obligated to maintain the level of service at or above the performance standards on the CMP transportation system. This means that local jurisdictions are required to mitigate the impacts on the CMP network that occur as a result of their land use decisions, regardless of where the impacts occur, including within other jurisdictions. Therefore, if a potential deficiency is not avoided through the land use/transportation analysis process or other action that antecedes the impact, the deficiency occurs and must be addressed by a deficiency plan prepared under the auspices of the impacted jurisdiction at the time the impact occurs. The exception is the case in which the facility in question is already addressed through a multi-facility, system level or "areawide" deficiency plan.

DEFICIENCY PLAN COMPONENTS

Government Code Section 65089.4(c) specifies the components of an approvable deficiency plan. The CMA is required to calculate the impacts subject to exclusion prior to inception of the process of preparing a deficiency plan, to determine if the calculated level of service following exclusion is consistent with the level of service standard. If the calculated level of service following subtraction of the impacts subject to exclusion remains below the CMP level of service standard, the deficiency plan is required. It is required to include:

1. Analysis of the cause of the deficiency. Although this component of a deficiency plan may have been originally intended to identify specific land use decisions that caused a particular roadway to exceed the level of service standard, experience in the larger urbanized areas of Southern California indicates that most deficiencies are a result of many local actions involving a multitude of local jurisdictions. In the case of a program which focuses on multi-jurisdictional, areawide deficiency plans, this element of the deficiency plan instead serves to identify the jurisdictions required to participate in and contribute to preparation and implementation of the deficiency plan.

2. List of improvements needed to maintain LOS standard. This element identifies the capital improvements or other strategies which, if implemented, would return the CMP facilities addressed by a deficiency plan to the CMP LOS standard. If a series of phased improvements would be needed through time to maintain the LOS standard because of continuing growth, all the improvements, along with a schedule which phases the improvements in relation to rates of development, could be incorporated within a single deficiency plan. This could avoid the need for preparation of numerous deficiency plans to address a single continuing problem. In the case of an areawide deficiency plan, any improvements needed to maintain the LOS standard on every facility in the area encompassed by the deficiency plan must be identified.

3. A list of improvements or strategies that will improve system performance and air quality. This element provides flexibility to move beyond (but not necessarily ignore) facility-specific, roadway level of service maintenance, to focus instead on multimodal transportation system performance throughout the entire area of interest. Instead of concentration solely on one or more facilities in relation to the CMP level of service standard, this approach also permits local policy to dictate the level of system performance (or performance improvement) to be achieved through implementation of the deficiency plan. According to CMA Board policy, the Comprehensive Transportation Plan is the mechanism through which the actions to be implemented through areawide deficiency plans are

to be defined. The system performance objectives of the CTP then become the system performance level to be achieved in the respective areas addressed by deficiency plans. In effect, the deficiency plans are the implementation mechanisms for local government actions in accordance with the Comprehensive Transportation Plan.

4. An action plan based either on strategy (2) or strategy (3) above, that shall be implemented, including a specific implementation schedule. The scheduling or phasing of implementation is this section's key component. The deficiency plan's implementation schedule for long-term strategies should be based on monitored increases in land use or actual traffic, rather than on absolute dates.

Under the areawide deficiency plan strategy of the CMP for San Bernardino County, much of the effort of deficiency plan preparation and implementation is accomplished through other planning efforts or other elements of the CMP. The improvements to be implemented through the deficiency plan are to be identified for each subarea of the county through the Comprehensive Transportation Plan. The Land Use/ Transportation Analysis element of the CMP described in Chapter 4, and the CMP monitoring program described in Chapter 7, are designed to support the deficiency plan process by tracking changes in land use that affect traffic locations, volumes, and modes to determine how actual population, housing, jobs, and traffic growth is varying from the growth assumptions on which the CTP was based. As disparities are identified between actual events identified by the monitoring program, and the forecasts of growth, biennial updates of the CTP will include tests of the original transportation strategy to determine if transportation performance objectives are met despite changes in growth patterns or rates, and if refinements to the CTP will be needed. Accordingly, deficiency plan updates will be undertaken as part of the biennial CMP update process to incorporate these refinements.

DEFICIENCY PLAN GUIDELINES

Statute requires the CMA prepare and adopt procedures for local deficiency plan development and implementation responsibilities, consistent with the requirements of Government Code Section 65089.4. Although procedures for development and implementation of areawide deficiency have been under discussion by a deficiency plan subcommittee of the CMP Technical Advisory Committee, formal guidance is still under development. Upon completion, it will reflect the outcome of the Comprehensive Transportation Plan process as it relates to actions to be implemented through deficiency plans, pursuant to adopted CMA policy. Following preparation of the deficiency plan guidance through the CMP Technical Advisory Committee, it will be incorporated into this appendix subject to approval by the CMA Board of Directors.

APPENDIX E

CMP CAPITAL IMPROVEMENT PROGRAM

(Copy of RTIP Project Submittal is available at SANBAG)

APPENDIX F

CONFLICT RESOLUTION PROCEDURE

SANBAG CONFLICT RESOLUTION PROCEDURE

1. Education

In order to provide member agencies with a working knowledge of dispute resolution options, to provide information on the methods and techniques for resolving disputes that require neutral intervention, and to reduce the frequency of unresolved disputes between local agencies, SANBAG shall provide an education program to Board members and staff in conflict management techniques.

2. Agreement to Participate

Local government agencies involved in an interjurisdictional conflict which cannot be resolved among the agencies may, through formal action of their policy bodies, agree to participate in resolving the dispute in accordance with this procedure. Evidence of the agreement to participate shall be forwarded by the local agencies to SANBAG, and shall describe the issue(s) for which review is requested. SANBAG's role shall be limited to providing assistance to the agencies in accordance with this procedure.

Participation in the conflict resolution process shall be voluntary, but is strongly encouraged prior to initiation of litigation by an agency. All parties involved in the dispute shall be requested to participate.

3. Implementation

The Conflict Resolution Procedure may be initiated by:

- one or more involved local agencies
- the SANBAG Board of Directors

4. Confidentiality

The process set forth in Section 5, below, shall be subject to the provisions of California law relating to confidentiality, and specifically the provisions of Section 1152.5 of the Evidence Code.

5. Process

a. SANBAG staff meets with the affected agencies for purposes of interviewing them regarding the nature and scope of the conflict and to request all necessary information. Such interviews shall be undertaken as soon as possible, but in no case later than 30 days from the date of agreement

by the agencies to participate. **SANBAG and the member agencies shall attempt to resolve the conflict based on this information within seven working days, prior to a continuation of the process.**

b. SANBAG staff facilitates the selection of a neutral third-party, **subject to approval and sharing of costs by both agencies,** to recommend an appropriate facilitation and negotiation model to be used in resolving the dispute which may include, but not be limited to:

- Mediation
- Arbitration

At any time, should the parties be unable to reach agreement on an issue associated with this conflict resolution process, they may choose to not continue further and attempt to resolve the issue by other means.

c. SANBAG staff serving, where appropriate, as a resource to the agencies, and a neutral third party convene the conflict resolution conference using the model agreed to by the agencies.

The conference should generally consist of the following elements:

Stage I.	Introduction
Stage II.	Opening statement by the agencies
Stage III.	Exchange (for purposes of developing an understanding of each agency's issues and positions)
Stage IV.	Development of options
Stage V.	Draft and execute agreement

d. The agreement is implemented by the agencies. Follow up of implementation of the agreement is done by SANBAG.

e. The Executive Director shall report to the Board at regular intervals on the use of the procedure by local agencies.

PRELIMINARY CONSTRUCTION COST ESTIMATES
FOR
CONGESTION MANAGEMENT PLAN

Add One Lane Each Direction on Freeway	
Asphalt Concrete Pavement	$2,300,000 Per Mile
Portland Cement Concrete Pavement	$2,800,000 Per Mile
Includes: Excavation Paving Section Barrier Shoulder Upgrade Drainage System Traffic Control Mobilization @10% Design @11% Construction Mgt. @12.5%	**Excludes:** Environmental Costs Right of Way Widening of Bridge Structures Added Retaining Walls Added Sound Walls

Widen Existing UC Structures	
Total Cost =	$160 Per Square Foot
Includes: Structure Mobilization @10% Design @11% Construction Mgt. @12.5%	**Excludes:** Environmental Costs Right of Way Traffic Control Ramp Modifications Signal/Lighting Up Grades Drainage Upgrades Added Retaining Walls Added Sound Walls

Diamond Interchanges			
$10,000,000	EACH	NEW IC	Minimal Row/Environmental
$15,000,000	EACH	NEW IC	Includes Row/Environmental
$20,000,000	EACH	EXISTING	Minimal Row/Environmental
$25,000,000	EACH	EXISTING	Includes Row/ Environmental
Includes: Structure Retaining Walls Soil Nail Walls Drainage System Ramps Mobilization @ 10% Design @ 11% Construction Mgt. @ 12.5%		**Excludes:** As listed	

Retaining Walls

Height Feet	Structure Cost $/LF	Mobilization Design Constr. Mgt. $/LF	Total $/LF
4	$190	$70	$260
6	$260	$90	$350
8	$380	$140	$520
10	$430	$150	$580
12	$480	$170	$650
14	$590	$210	$800
16	$660	$240	$900

Excludes: Environmental Costs
Right of Way

12' High Sound Walls (Masonry Block on Footing)

Structure Cost $/Mile	Mobilization Design Constr. Mgt. $/Mile	Total $/Mile
$800,000	$300,000	$1,100,000

Widen Conventional Highway

1. Add one outside lane (Work includes earthwork, modify existing drainage system and construct AC shoulder section.	
Asphalt Concrete Pavement	$1,000,000/Mile
2. Add one outside lane each direction (Work includes earthwork, modify existing drainage system and construct AC shoulder section)	
Asphalt Concrete Pavement	$2,000,000/Mile
With Median Concrete Barrier	$2,200,000/Mile
With Median Double Thrie Beam Barrier	$2,300,000/Mile

Local Interchange Improvements

1. New Interchange	
Urban Interchange	$10,000,000 to $17,000,000
Partial – Cloverleaf Interchange (Work includes new OC structure, earthwork, signal)	$6,000,000
Diamond Interchange (Work includes new OC structure, earthwork, signal)	$5,000,000

Local Interchange Improvements CONT…		
2.	Reconstruct Existing Interchange	
	Realign and widen existing ramps (to 2 lanes)	$750,000/Each Ramp
	Construct Loop on – ramps (Does not include realigning existing ramp)	$700,000/Each Ramp
	Upgrade existing Diamond IC to Partial – Cloverleaf	$6,000,000
3.	Improve Existing Interchange	
	Widen ramps (From one to two lanes)	$350,000/Each Ramp
	Widen existing OC structure	$110/Sq. Ft.
	Signalize ramp intersection	$90,000/Location
	Upgrade existing signal at ramp terminal	$75,000/Intersection
	Upgrade existing signal at ramp terminal (Add lights only)	$25,000/Each
4.	Ramp Metering System	$60,000/Each location
Intersection Improvements		
1.	Signalization of local intersection (with some roadwork)	$250,000
2.	Upgrade existing intersection signalization	$75,000
3.	Upgrade existing Traffic Controller/Assembles	$40,000/Each
4.	Install new signal	$90,000/location
5.	Add signal heads	$25,000/Intersection
6.	Construct left – turn lane (240’ long)	$50,000/Each Location
7.	Street widening (12’ wide) (Pavement only)	$180,000/Mile
8.	Curb and gutter (Type A2-8)	$15/LF

Other Improvements		
1.	Construct new OC structure (Does not include roadway work)	$100/Sq. Ft.
2.	Construct Retaining Walls (Type 1)	$285/LF (H=8') $360/LF (H=10') $460/LF (H=12') $560/LF (H=14')
3.	Construct Soundwall	$1,000,000/Mile (H=12')
4.	Traffic Management Plan	10% of total construction costs

NOTE: This cost estimate does not include the following items:

1. R/W engineering, appraisal, acquisition and utilities relocation costs.
2. Minor items and supplemental work (10%).
3. Mobilization (10%).
4. Contingencies (25%).
5. Landscaping costs.

General Note: **When adding a through lane, the minimum distance is 600' approach and 600' departure to the next intersection.**